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THE ESTABLISHMENT OF SANITARIA FOR PULMONARY DISEASES IN THE VICINITY OF OUR GREAT CITIES.

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The treatment of pulmonary diseases in sanitaria established for the purpose, has been for a number of years a well-recognized method in Europe, especially in Germany, and during the past few years, the foundation and success of institutions in various parts of the United States, shows that the hopes of those who originated the idea were not in vain, and that much more can be done now than heretofore in combating the ravages of consumption.

To Hermann Brehmer should be given the credit of having established the first institution of the sort, about thirty-two years ago, in Görbersdorf, a little village of Silesia, situated in a well-sheltered mountain valley about 1,600 feet above the level of the sea, where phthisis was never known to arise, and where Brehmer himself recovered his health.

He conceived the idea of establishing there an institution to be devoted to the treatment of pulmonary diseases only, and although ridiculed and maligned to an outrageous degree at first by members of his own profession, he finally proved that his views were correct, and his name and memory now are honored throughout Germany and elsewhere in the medical world.

Since then, and upon the same principle, the famous sanitarium at Falkenstein, in the Taunus Mountains near Frankfort-on-the-Main, was established under the care of Dettweiler, and later, many smaller institutions have sprung up in various parts of Germany, all devoted to the same purpose, and although varying perhaps in details of treatment, they carry out the same general idea that good food, fresh air, and strict supervision to prevent the results of indiscretion in diet and mode of life, are the chief factors in restoring the patients to health. Under these methods, both Brehmer and Dettweiler claim that 50 per cent. of the incipient cases of pulmonary disease have been cured.

It was my good fortune in the summer of 1889 to see both of the above-mentioned sanitaria, and I can testify to the great care and pains shown by those in charge of the institutions. Brehmer's sanitarium at Görbersdorf is a lasting monument to a noble man. Beginning as a small cottage for two or three patients, a little over thirty years ago, the institution now comprises two immense red-brick, Gothic buildings, with accommodations for 200 or more patients; a large winter-garden, reading-rooms, etc., in addition to various small villas scattered about the grounds for wealthier patients. Beautiful gardens surround the houses, and a magnificently wooded park, with carefully graded paths extending for many hundreds of acres over the sides of the mountains, forms a delightful pleasure-ground for the use of the patients.

In both of these institutions the strictest watch is kept over the general treatment of the patients, in regard to diet, amount and kind of exercise, and methods of life generally. At Görbersdorf, after a light and early breakfast consisting of a cup of tea, coffee or milk, with bread and butter, exercise in the open air is prescribed, and regulated according to the ability or disability of the patient. When the patient's strength admits of it, a walk up the mountain side through the park is advised. To facilitate this paths are laid out with the greatest care at a very gentle grade, seats being provided at many points, and the patients are told to stop and rest frequently to avoid undue fatigue, and at the same time to enable them to get the benefit of increased expansion of the chest and quickened circulation, so important in cases of pulmonary disease. Even in the height of winter is this made possible, as the paths are cleared of snow every morning by 8 o'clock, up to the top of the mountain.

About 11 o'clock a more substantial breakfast is served, dinner at two, and supper at about half-past six, the intervening time being occupied by exercise or rest in the open air, the patients even in the coldest weather, well wrapped up, reclining in chairs for hours during the day.

The moral welfare of the patients is cared for also, and frequent concerts, readings, games and other forms of amusement form an important feature of the treatment.

The same general methods are carried out at Falkenstein, and although the institution has not yet reached the magnificent condition of Görbersdorf, everything is done for the comfort and welfare of the patients.

It is a significant fact in favor of sanitarium treatment, that although the climate of Görbersdorf differs decidedly from that of Falkenstein, yet the favorable results are about the same in both places. In Görbersdorf they are blessed with infinitely more sunshine than in Falkenstein, which although situated at about the same altitude as Görbersdorf, and on the sheltered side of the mountain, has the characteristic wet, gloomy weather of a German winter.

Opinions differ at present as to the effects of altitudes *per se* in its beneficial effect upon pulmonary disease; some observers maintaining that is is one of the most, if not *the* most important factor in the large percentage of cases of recovery reported in regions over 1,500 feet above the level of the sea.

Brehmer himself remarked to me that he believed the altitude of Görbersdorf (about 1,600 feet above the level of the sea) had much to do with his success. Dettweiler, on the other hand, deemed it of much less consequence than other factors. Observers like Solly, Fisk and Denison, in Colorado, are firm in their belief that the altitude of Colorado (over 6,000 feet) is one of the chief reasons of the benefit obtained by the life there, while Dr. Geddings, of Aiken, S. C., whose large experience makes his opinion of much weight, is evidently of the same opinion as Dettweiler.

A discussion upon this point would be of great interest, but it is out of the limits of this paper, as I only wish to speak of the plan of establishing sanitaria for pulmonary diseases in the immediate vicinity of our great cities, in healthy localities, for the benefit of those who can not, or will not, for various reasons, seek more salubrious climates.

The late Dr. Paul Kretschmar, of Brooklyn, N. Y., two or three years before his death, read papers before the American Climatological Association, and before the local New York societies, strongly urging the establishment of such an institution in the hilly portion of New Jersey, near New York, but so far as I know, no active steps have been taken towards carrying out Dr. Kretschmar's excellent idea.

Very early in my practice I felt that some such institution was needed near Boston, and as the idea grew stronger, I was enabled, with the assistance of Dr. Lovett, to establish, through the generosity of wealthy people here and elsewhere, a small Sanitarium at Sharon, Mass., on the Providence railroad, a region long known as one of the most healthy localities about here, on account of its gravelly porous soil, its abundance of woodland, and pure water-supply, my idea being to supply to people of very limited means a comfortable home where at the same time a constant medical supervision could be maintained.

The institution was opened last February, and although it is, of course, much to early to give actual results, yet the evidences of the advantage over this method to that of sending patients hap-hazard out into the country to board, are so strong, that I am already convinced that I was not wrong in my first belief that a properly regulated sanitarium would be of the greatest use in our community.

A brief description of the sanitarium will be in place here.

The place selected was a small farm on high land not far from the Sharon station, overlooking a charming view towards the south and west. The soil is gravelly, very porous and dry, well-water not being found above twenty or thirty feet below the surface. Behind the house stretches from east to west a number of acres of woodland, chiefly of pine and hard-wood trees, which, with the line of the Moose hills, form an effective shelter from the harshest winter winds. On three sides of the house extends a broad piazza, in the centre of which, in a recess made on the southern front, the patients can be well protected, even in severely cold weather, when exercising or resting in the open air. The interior of the house is arranged to have as much sunshine and good ventilation as possible; open fireplaces are found in every room, and each patient has her own separate bedroom, no two ever sleeping in the same apartment. The walls are all painted, and are frequently wiped with damp cloths; the floors are of hard-wood covered with rugs, which are frequently cleansed, no laid carpets being allowed. The strictest rules are made as to the sputa of the patients. Cuspidors filled with damp sawdust are on the ground floor, and the contents are burned every day. In the bedrooms small paper cups in frames are at the bedside, and burned after use. When on the grounds the patients carry cloths placed in a rubber pouch in the pocket, the rags being destroyed in the same manner, and the patients are forbidden to expectorate on the grounds or to use any other receptacle than those provided, every effort being made to insure the utmost cleanliness.

The treatment usually pursued is first, that of giving all the good nourishing food possible at the three daily meals, a lunch of milk or raw eggs being taken in the middle of the forenoon and afternoon. According to the nature of the case, more or less exercise in the open air is taken, and daily rest in reclining chairs on the piazza, even in midwinter, when the sun shines, is one of the most important parts of the treatment, especially in hæmorrhagic cases, in which much active exercise either on rising or level ground, is prohibited.

In most cases, I have found the tri-weekly or daily use of the pneumatic cabinet to be of very marked benefit where expansion of the chest is needed, combining it oftentimes with some soothing vapor in cases where symptoms of bronchial irritation are marked. It is in such institutions that this instrument, or other methods for expanding the chest and inhaling medicated vapors, can be used with the most beneficial effect, for the patient has the advantage of being near at hand, and can easily take the treatment as often as thought necessary. Judging by the effect in most cases at the sanitarium I regard the pneumatic cabinet as one of the most valuable factors in the general treatment. Tonics are usually given; stimulants occasionally when necessary, but drugs are avoided as far as possible. Everything is done to contribute to the mental welfare of the patients, and drives through the country and both out-door and in-door games are encouraged.

The institution only receives women now, and only cases which are in the first stages of pulmonary disease. We hope, as the project grows, to have cottages built adjoining the present house and to receive both sexes.

The objection has been frequently raised by some, that the effect of putting many patients together is to increase the risks of possible infection, and that the effect upon the patient of seeing others ill about him, will be very depressing and hence deleterious.

That both of these objections have a certain amount of truth in them no one can deny, but that practically they amount to very little, to those who have had experience in sanitaria, I am convinced.

Before the Sharon Sanitarium was begun, I felt very strongly the force of the latter objection, and one of my first questions to Dr. Trudeau, when I visited his sanitarium at Saranac, N. Y., was, "Do not the patients become depressed by seeing each other ill?" In reply, he said, "Listen to that!" and at that moment the sound of some negro songs and very jolly laughter came from a group of patients on the piazza near by, and he added, "That is the way it is all the time. Of course, there are times when each one feels depressed, especially at first; but they usually become accustomed to their surroundings, and, if they improve, seem as happy as possible." This

was quite in keeping with the sentiments expressed at the large institution at Görbersdorf, by a young American lady who had been there for two years, when I asked her if she never felt depressed at being in a place where there were so many sick people. She laughed and said, "Oh, for the first two weeks I came, I was homesick, and of course I felt depressed; but I soon got over that, and ceased to think of it, and I am so happy here now I hate to think of leaving, as Dr. Brehmer tells me I probably can in a few months"; and she told me that was the feeling with the majority. My own experience with the patients at Sharon only confirms this idea. They seem very happy; and when depression comes I usually find it attributable to some outside cause, and not to the proximity to other patients.

As to the possibility of infection; with proper care I think this danger is reduced to a minimum. No one would deny that the ideal way would be for each patient to have his or her own establishment, with a physician in constant attendance to regulate the daily mode of life in the most perfect climate to be found; but as this method is unfortunately impossible for the large majority of sufferers, a less expensive course must be adopted, and my own belief is that the advantages of the method of treatment I am advocating so far outweigh its possible dangers that the latter practically fade into insignificance.

Dr. S. E. Solly, of Colorado Springs, in an admirable paper entitled "Comparative Results of Treatment of Phthisis by Climate,"[1] gives the conclusions of several of the most celebrated authorities upon pulmonary diseases in Europe and America, and by them gives a very convincing proof of the great advantages of treatment in closed resorts (sanitaria) as compared with that in open resorts. In Table III, entitled "Comparison Between Open Resorts and Sanitariums in Low Climates," he gives the following striking figures:

ALL STAGES OF THE DISEASE.

	Cases.	Cured.	Benefited.
Open Resorts in Low Climates	1,724	6%	46%
Sanitariums in Low Climates	2,443	13%	27 1/3%

FIRST STAGES OF THE DISEASE.

Open Resorts in Low Climates	685	5%	45%
Sanitariums in Low Climates	89	31 1/2%	45%

In thus advocating the establishment of sanitaria in healthy towns near our large cities, I do not wish it to be understood that I expect such results as are obtained in climates more salubrious and less trying than our own; but I firmly believe, and am daily becoming more convinced from results thus far obtained at Sharon, that we can do infinitely more than heretofore to help a large class of patients who are unable for various reasons to seek other climates.

DISCUSSION.

Dr. Mason: I am sure that Dr. Bowditch's sanitarium will be of the greatest possible service, especially when its scope is increased through larger means, so that more patients can be taken, and when it can be made available for men. At present there is the greatest difficulty in Boston in having a male phthisical subject in the early stages taken care of for a long time. They come to our out-patient departments and wards for a few weeks, and then disappear. They are not able to pay a large amount of money for their support, therefore they generally go rapidly from bad to worse. The women have a better chance in small homes for that purpose. I do not think a large number recover in the small city establishments. I hope the time will not be long before Dr. Bowditch's sanitarium will be able to receive at least a few men such as present themselves every week at our hospitals and have to be turned away without much hope of benefit.

Dr. Osgood: One factor of Dr. Bowditch's sanitarium, which I am very glad has been opened, I wish to endorse strongly, and that is the separation of his patients. This plan recalls to me an interesting visit which I made ten or twelve years ago at the Hospital for Consumptives in Ventnor, Isle of Wight. For at this institution, consumption was treated upon what was called the "separate system." At the time this hospital was opened the bacillus of consumption, of course, was unknown, and undoubtedly the separate plan of treatment adopted resulted simply from the observation of physicians, namely: that consumption, if not contagious, presented a good many strange coincidences in cases where persons who took care of the consumptives themselves were attacked by the disease. However that may be, the Ventnor plan, so far as I know, was in advance of any treatment of consumption that is in general use to-day, and I would like to ask Dr. Bowditch if his sanitarium is not the only one in the country in which patients are treated on the separate system, which, of course, is the only one to be used in this disease.

Dr. Bowditch: I cannot say positively. I know of Dr. Trudeau's sanitarium at Saranac. He never has more than two patients in a room, and most of them have separate sleeping apartments.

Dr. Osgood: In the Ventnor hospital, by means of charitable donations, every patient, even the poorest, had his private room. I am quite able to sympathize with Dr. Bowditch's new project, because, being connected with the Home for Incurables, I am fairly pestered by people who demand entrance for consumptives into the Home. Our regulations refuse admission to such cases. It seems to me there is no question as to the great need of such retreats for consumptives among our poor. I hope Dr. Bowditch's sanitarium will become rapidly enlarged.

Dr. Knight: I think there can be no question in the mind of any one who has had to deal with pulmonary disease, tuberculosis particularly, that it is one that requires such constant care and supervision, that it can be afforded much better in an institution than out of it, it being not the disease which has to be treated at present, but the condition of the patient, and the factors are so many which have to be regarded in improving the condition of the patient, and enabling him to withstand the disease, and brings about its ultimate arrest, that it is only the most constant care which brings about, in the majority of cases, the successful result, and there is no question that the results are better in sanitaria than outside of them. Of course the sanitaria in health resorts like Colorado are going to show better results, as a rule. There are two in Colorado Springs, and it is fair to suppose that their results are going to be somewhat better at any rate, than sanitaria in our own neighborhood, but the constant care which they get in the sanitaria here is going to be productive of excellent results.

The first time that this subject was brought to my mind very forcibly, that hospital treatment was good for consumption, was when I was in Bellevue, temporarily serving with the elder Flint. He said one day: "Did you ever notice how well these consumptives do in the hospital, although our diet is poor, and you would suppose that, in the crowded condition of our wards, they would not do particularly well, but you notice how well they are doing, and they are not having any medicine. You see what the regulation of their life will do for them." This was true so far, that the majority of consumptives who came in, in all stages, improved from the judicious regulation of their diet and habits of life. Now it is perfectly well known that a patient will undo, in one day's overexercise, all that you have done for him in six months. That is not likely to happen in the sanitarium, neither are they likely to be upset in the thousand and one ways that their relatives and friends at home offer them. That is one advantage—being free from the constant meddling and annoyance of friends.

Then the association of patients with the same disease, curiously enough, leads them to feel very differently with regard to it. They talk over their symptoms, expectoration, consolidation and bacilli, just as we talk about matters of medicine, with no more feeling really than we have.

The other day, when I was at Sharon, I was asked to drive down to the station with an attractive young lady. She had been discharged at the end of a week's residence. She was supposed to have serious disease, but upon careful examination it was found that she did not have tubercular disease at all. I imagined she would rejoice at getting away from all those people, but on the other hand, she was mourning that

[1] Hare's System of Therapeutics, Vol. I. H. C. Lea & Sons, Philadelphia.

she could not stay. She said it was a delightful place, and she would like to have stayed several months, so that the impression made on her mind in a week's time was only a pleasant one.

Dr. Bowditch, in closing, stated the present capacity of his sanitarium was for nine women. Incipient cases were especially desired, since they offered better prospects of cure. It was not a hospital. All the patients were up and about, and able to take walks. They were not obliged to lie in bed unless something occurred which made it desirable to remain in bed for a day or two. There was no provision for free patients at present. The price of board for each patient was $5 per week.

KERATITIS BULLOSA.

Read before the Chicago Pathological Society, Feb. 8, 1892.

BY J. ELLIOTT COLBURN, M.D.,
OF CHICAGO.

This exceedingly rare disease of the cornea I have met but twice in a private and dispensary practice extending over a period of more than ten years. Researches made for literature upon the subject yield scanty returns, as many other specialists appear to have been even less favored, and some of the articles are quite vague, and rather evince the idea that the writer has not personally come in contact with the disease.

Mr. O—— had been suffering for seven months from a recurring sensation of irritation in the lower lid, as he supposed, of the right eye. At night, it was only after firm pressure and much rubbing, that he was able to keep the lid closed, and frequently was not able to sleep on account of the irritation. Upon examination I found a small vesicle on the cornea, near its margin, which, on being punctured, discharged a minute quantity of clear fluid. These invasions were always attended by flushing of the head and face, considerable general disturbance and ocular neuralgia. At this time the patient was given a solution of zinc sulph., grains 2, aqua, ounce 1. Eight days later the vesicle had again filled, and the irritation had returned. I again opened the sac, thoroughly removing the pellicle, and made an application of a 4 per cent. solution of argentum nit.; it did not recur. I was unable to determine any disease or abnormality of the eye, or any cause for the growth.

My second case occurred during the past fall. Mrs. S—, aged 68 years, in delicate general health, atheromatous arteries, secretions scant, evidence of much physical suffering. She gave the following history: Twelve years before noticed that vision in right eye was below normal, and that it gradually became less, until there was only perception of light. About one year ago the eye became painful, tender and irritable, followed by the sensation of a foreign body under the upper lid. The eye felt full and protruding, the patient was unable to sleep, restless, and feverish. This condition was quickly followed by lowered sensation of the cornea, and sometimes a gush of tears would seem to give relief, and recovery quickly follow. These attacks occurred with great frequency. This condition not being benefited by the remedies exhibited, the case was referred to me nearly a year after the first invasion, when I found the following:

Left eye normal, but slightly flushed; right eye, conjunctiva much congested, lids closing spasmodically, excessive lachrymation, tension above normal, pupil slightly dilated, lens opaque and shrunken, iris tremulous. Towards the lower margin of the cornea, and extending upwards, there appeared a small elevation—clear as the cornea, but marking itself by a small point of light reflected from its apex. This elevation was found to be somewhat triangular in shape, with the apex near the centre of the cornea, and filled with a fluid which fluctuated by the pressure of the lids. The sac was punctured, and a small quantity of clear fluid flowed out. The tumor disappeared, and a solution of boracic acid was given, with sulph. cocaine to relieve the pain. The patient was directed to return as soon as the sac had refilled, which occurred on the fifth day. The pellicle was carefully removed, and the whole area cauterized by a careful application of carbolic acid. Eserine was also given to lower the tension, and the cocaine to relieve the pain. On the seventh day the sac had again filled; it was again removed, and the exposed surface cauterized, this time with argentum nit., 20 grains to the ounce. I then tried galvano-cautery, actual-cautery, etc., but without any permanent results. The left eye was becoming more irritated, and tender; photophobia, excessive lachrymation and cloudiness of the cornea persisting after the attack had subsided in the right eye, led me to fear that the irritation in the right eye was threatening to excite sympathetic disease in the left. I then advised enucleation, and, upon consultation Dr. Holmes concurred with me in this matter. Dr. Patton administered the ether, and assisted by Dr. Stannard, I enucleated the eye. By repeatedly instilling cocaine prior to the operation, we were enabled to remove the eye with but slight etherization. The wound healed by first intention. The left eye, which had been very irritable and painful, became normal, and the vision improved.

CASES OF PEMPHIGUS CORNEA.

These cases so closely resemble in physical appearance the preceding, that I have given three out of eight cases which have come under my observation.

Case 1.—C. S——, aged eleven years, complained of blurring vision in right eye; no pain except at night or when he attempted to close the lids. Upon examination a small vesicle was found over the centre of the cornea, about one line in diameter. In attempting to rupture it by pressure upon the lid it was extended three times its former diameter. As I saw this case before the days of cocaine, I applied a pressure bandage and directed the patient to return on the second day, when I found no trace of vesicle, and no opacity. It did not recur.

Case 2.—Mrs. A——, aged 31 years, teacher, was injured in the right eye by a paper wad. Had experienced no irritation except for ten or fifteen minutes immediately following the injury. I saw her upon the fourth day after the injury, and found a small vesicle just below the centre of the cornea. There was no corneal injection, or other symptoms of irritation. I advised the use of pressure bandage at night, and upon her return on the following day, I found no trace of the previous trouble.

Case 3.—Mr. T——, of Kansas, aged 42 years, a few days before leaving home noticed a slight irritation in one eye following a ride in drifting sand; had been free from annoyance after the night following the ride until four days later, when he found he could not see well, and experienced a sensation of a foreign body in the lower lid. Upon examination I found a small vesicle near the limbus of the cornea

applied cocaine, and punctured. The following day could find no trace of the trouble.

A careful examination of the meagre literature upon this subject, both in the text-books and reports of cases, would seem to indicate that there are two forms of vesicles—one which can be, with perfect propriety, classed as a keratitis bullosa—accompanied by inflammatory symptoms; the other a simple pemphigus, free from any manifestation of irritation other than that incident to the friction of the lids over the vesicle.

Keratitis bullosa, or inflammatory vesicle, occurs in eyes suffering from lowered nutrition, most frequently inter-curring with glaucoma, chronic iritis, irido-cyclitis,or chronic non-suppurative pan-ophthalmitis. The first symptoms are peri-corneal flushing, photophobia, sharp pain followed, in a few hours, by the sensation of a foreign body in the eye, which is aggravated by every movement of the lids and attempts to close the eye. Accompanying these symptoms there may be supra-orbital pain, and tenderness over the frontal region, and great general disturbance. After a few hours, the tension of the globe becomes markedly increased, the pain lessens and the cornea becomes more or less insensible to the movement of the lids or to the touch. The rupture of the capsule occurs spontaneously from the pressure of the lids and the rubbing of the fingers. In the interval which now occurs between the formation of the second bulla, there is a return of sensation, slight photophobia, lower tension—even to much below normal, the margin of the bulla is outlined by a slight elevation fringed by the ragged and shrunken walls of the ruptured vesicle. When the vesicle is preparing to return promptly, before there has been complete repair extending over the area covered by the bulla, it will be frequently observed that the centre gives an opalescent reflection. This occurs before there has been sufficient time to cover the space with normal epithelium, or obliterate the ragged edges of the vesicle.

According to Schmidt Rimpler, the contents of the vesicle may at times be tinted with blood, but from my observation this takes place in very chronic cases where there has been much vascularity of the cornea in the region of the vesicle, and I am not sure that the tinting with blood is not due to the rupture of vessels in the pellicle.

Arlt says that "The walls of the vesicle do not consist, as was formerly believed, of Bowman's membrane and the epithelial layer, nor of the latter alone, but of a new layer of tissue inserted between the two, and of proliferating cells." This condition would seem to explain the apparently firm boundary of the vesicle, and the impossibility of dissecting up the cornea, by pressure and manipulation. Each new vesicle is an independent structure, for there is scarcely time in the interval, for the renewal of the epithelial layer already destroyed.

Pemphigus Cornea.—A non-inflammatory vesicle of the cornea, seldom multiple, nor occurring during any eruption or neuralgic disturbance of the head or face.

This form of vesicle is more frequent than the inflammatory, and may occur at any age, and may or may not be coincident with other ocular diseases. The vesicles occur centrally more frequently than at the periphery of the cornea, and frequently fill with great rapidity. There is no pain or irritation, unless the vesicle is pressed upon by the lid, and no peri-corneal flushing. The base of the vesicle is oval or round, and pressure upon it, made by traction with the finger upon the lid, will extend the vesicle in the direction of the pressure, even to the dissecting of the cornea to its border.

The capsule once ruptured, never refills, but a greyish opacity covers its base, which rapidly disappears by the replacement of the epithelial layer. There remains no opacity, or change of curvature of the cornea. In some cases the vesicles do not rupture, but become more and more attenuated, until they finally disappear.

The causes of the formation of these bullæ are not always clear, but in my experience they have been the results of slight, non-penetrating injuries to the cornea, resulting in a separation of the epithelial layer. A close examination of the contents have never revealed any encysted foreign particle.

The treatment of keratitis bullosa, aside from enucleation or abscission, has not met with brilliant results. Hasner reports a case of cure following a superficial excision of the portion of the cornea involved. Mittendorf suggests quinine, and anti-malarial remedies, but casually remarks that these have never cured.

Iridectomy and paracentesis cornea have been tried without benefit. In my case we tried cautery with carbolic acid, 95 per cent., argentum nit., 4 per cent.; galvano and thermo-cautery, and curetting, without permanently good results.

In view of the reports of cured cases, even though the differential diagnosis may not have been carefully made, it would seem advisable to try any or all of the means of cure suggested, especially if the vision of the fellow eye is below normal, and is liable to further degeneration. If the patients are weak and debilitated from disease or age, it would seem best to state the case fairly, and allow them to determine whether they will submit to further attempts to cure with the possibility of failure, or at once submit to enucleation. The possible influence of the constantly recurring irritation of the affected eye on its fellow, must not be overlooked, and vigilant watch kept for any symptom pointing to sympathetic disease. Cocaine and eserine may be used for local relief. In the treatment of simple vesicle or pemphigus cornea I have had good results from ordinary pressure bandages, but lately have used cocaine, and punctured the sac with a fine point. I have found no other treatment required in the eight cases, three of which I append in my report.

DISCUSSION.

Dr. J. M. Patton: Mr. President, I had the opportunity of examining the eye, and I saw the operation in this case, and the appearance of the vesicle resembled so much that of the pemphigus form that I have seen, that it seems to me it would be very difficult for a person to make a differential diagnosis, and that we might readily get into difficulty by waiting too long trying to do something with that form before the general practitioner would recognize the fact that he had anything else but a pemphigus vesicle to deal with. The case which I saw was probably a well marked one, and the operation was skilfully and quickly done by Dr. Colburn —necessarily so, because the lady was quite old and feeble; she had organic disease of the heart muscle and valves, and it was a question as to whether she would be able to take an anæsthetic. Certainly it would not be safe to have given her chloroform, and probably not safe to have given ether to full anæsthesia. The case illustrated the fact that such operations may be nicely done by a moderate amount of anæsthesia combined with the use of cocaine locally. She took a

small quantity of ether to the first stage of etherization; it did not reach the disturbing period at all. She felt no pain, and the operation was done without any trouble whatever. It could not have been done so quickly and efficiently with either of the anæsthetics alone, or by the single use of cocaine.

I would like to ask Dr. Colburn if there are any distinguishing features to differentiate these two forms that he would lay special stress on?

Dr. Colburn: I endeavored to point out the two forms of the disease in the differential diagnosis. In the simple vesicle or pemphigus we have no inflammatory symptoms, excepting those incident to the irritation of the lid in moving over the vesicle. In keratitis bullosa we have the inflammatory symptoms preceding and following the formation of the vesicle. And then, furthermore, in keratitis bullosa the vesicle occurs almost invariably in eyes that have been previously diseased, and in those in which there has been marked interference with the nutrition. In the case which I first mentioned, it would be almost problematical whether the condition was related to keratitis bullosa or pemphigus cornea were it not that it had persisted for so long a time; from the fact that there had been a constant irritation for a period preceding the formation of the vesicle, during its development, and after it had emptied, it would point to its being what we know as a keratitis bullosa. Then there is the period of anæsthesia that occurs for a short time after the vesicle is thoroughly filled, and very frequently in these cases, so far as I can find from the literature of the subject, there is increased tension of the eye. In pemphigus cornea I have not seen a single case of recurrence of the disease. Another point of difference is that in simple vesicle you can by pressure through the lid extend the vesicle in any direction. In keratitis bullosa you cannot so extend it; it is perfectly rigid. The vesicle will rupture after firm pressure, but will not extend beyond its primary limits. In this case, I think that the constant attempts to remove the vesicle increased the irritable condition of the eye and tended to produce sympathetic irritation in the other eye. Whether there was any sympathetic inflammation excited, I do not know. That could only be told by following the case for some time.

Dr. Patton: You would lay stress on the history or absence of continued irritation in the eye, would you not?

Dr. Colburn: Yes. If I were convinced that the patient had a recurrent vesicle, and that this was but one of many, I should call it keratitis bullosa if the case had the other symptoms of inflammatory invasion.

Dr. Geo. H. Cleveland: I would like to ask Dr. Colburn what connection there is between these troubles and a simple ulcer of the cornea? Or whether a simple ulcer of the cornea may result from these affections? In a simple inflammation, involving corneal layers with destruction of the layers, would perforation occur if the case continued? Furthermore, what is the exact pathology of this trouble(keratitis bullosa)? Have microscopical examinations been made in reference to a specific organism? If so, what effect would the stronger antiseptics have in the treatment of both affections?

Dr. Colburn: To the query, whether they would produce ulcer of the cornea, I would say this, that, I presume, if any of those vesicles were ruptured in an eye that contained any of the pus-producing microörganisms, you might get an ulcer following; but there must necessarily be some infection, and the first form is pretty well guarded from infection, because it is evident from the investigations of Arlt that it has an epithelial lining membrane, and that would rather protect it from inoculation. In the case of pemphigus cornea, where there are simply vesicles to break down, I presume that, if under proper conditions they were infected, an ulcer would be produced. I do not see why they should not be subject to infection as well as when a foreign body punctures the epithelial layer. The tears are so well provided with the power of destroying, washing out and keeping clean the conjunctival sac, that it seldom is infected. If the nasal duct and lachrymal sac are inhabited by organisms, I have no doubt they might extend and produce trouble.

Regarding the true pathology, I think very little definite of the first form is known. The examinations made by Arlt would seem to indicate that there is a new formation between the epithelial layer and Bowman's membrane, and that it is speedily reproduced. It will take four or five days for the new epithelium to extend over the denuded area, yet bullæ will appear within eight days from the time one has been destroyed. I do not think there is any microörganism entering into the cause of its formation.

Dr. J. J. M. Angear: Charcot has taught us that certain ulcers follow disease of the spinal cord. Pathologists agree, I think, that herpes is the result of nerve irritation; that we have ulcers of the eye from the destruction of the optical branch of the fifth pair of nerves. I have listened to the paper attentively, and I thought if there was anything pertaining to the nervous system that was the real cause of these ulcers; or whether pathologists have thrown out the least intimation with reference to this affection being a nerve trouble.

Dr. Colburn: I purposely avoided the discussion of herpes, as it comes under an entirely different head. So far as I have been able to learn there is no relation between the nerve irritation and the formation of these vesicles; there may be indirectly in the simple vesicle. There you have a separation from the impinging of some foreign body on the cornea—a separation of the epithelial layer from its basement membrane, which may be due to paralysis of the terminal nerve supply. It is purely local, however, and it is simply the terminals that are so affected. Enucleation should be a last resort or in cases where the constant irritation is exhausting the patient or threatening the fellow eye with sympathetic disease.

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FOUR CASES OF ORBITAL TRAUMATISM

RESULTING IN IMMEDIATE MONOCULAR BLINDNESS THROUGH FRACTURE INTO FORAMEN OPTICUM. IN ONE OF THESE CASES THE BLOW WAS OVER THE LEFT ORBIT CAUSING BLINDING OF THE RIGHT EYE.

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The ancients as far back as Hippocrates, were aware that blows on eyebrows or skull were followed at times by immediate monocular blindness.

Hippocrates wrote that amaurosis sometimes follows wounds inflicted on eyebrows or other parts of head.

During the past hundred years medical writers alluded to the possibility of sudden blindness following injuries of the skull. The etiology was in doubt; Beer's theory being most in vogue, viz.: that the injury to the supra orbital nerve caused the blindness; to this, later writers added the infra orbital nerve as a probable cause. Lawrence[1] gives in his book four cases in detail, and remarks that although the fact appeared to be well established, no one furnished the history of any cases, referring especially to Beer and Wardrop, both of whom had written on this subject. Since Lawrence's time there has been no lack of recorded cases, but it remained for R. Berlin to establish on a sound basis the true pathology. At the twelfth meeting of the German Ophthalmologists in Heidelburg in 1879, Berlin, besides reporting three of his own cases, gave an analysis of Von Holder's very carefully made autopsies in 126 cases of skull fracture. Von Holder for thirty-three years filled a position, corresponding to a medical coroner. In eighty-eight of the 126 cases the fracture involved the base of the skull, and in eighty the orbital roof was likewise fractured, making 90 per cent. In fifty-four cases, or 60 per cent., the lesion extended into the foramen opticum.

Unfortunately, these cases had no clinical data,

[1] Diseases of the Eye, London, 1883, p. 128.

but at the same time they established beyond doubt the frequency with which the optic canal was involved. In forty-two of the 126 cases, the injury was due to gunshot wound through mouth or temples, and in eleven, falling on the head, while only one, where the skull was run over.

In the cases where death does not result from the injury, the patient is stunned or dizzy, may suffer from shock, bleeds from ear, mouth or nose, and soon discovers that one eye is blind. There may be œdema of the eyelids, eye is diverged and protruded, pupil enlarged and irresponsive to direct rays of light. Ophthalmoscopic examination immediately after injury is, as a rule, negative, but within two weeks, at the very utmost, pallor of the optic nerve is noticeable, and often much sooner; some regain enough vision to count fingers at some feet, the eye remains divergent, with enlarged pupil. Optic nerve atrophic.

The explanation of the fracture involving the foramen opticum is as follows—as it appears to me:]

The frontal bone unites with the nasal, submaxillary, lachrymal, and ethnoid bones by a continuous line of sutures, until the lesser wing of the sphenoid is reached, and at this point, the suture line bifurcates forming an obtuse angle, and quite near the apex of the angle is the foramen opticum. The jar made by the blow would find its weak point along this line of sutures, and the first resistance would be at the bifurcation adjacent to the foramen opticum. The movement or jar could not follow both lines with equal force at and beyond the bifurcation, consequently the unequal strain would result in fracture of the bone into the foramen opticum, causing compression of the optic nerve and sudden loss of vision in the eye.

G. F. S., age 23, artist, was brought to me March 3, 1890, while suffering from shock. From his companions I learned that while fencing with a friend, a thrust of the friend's foil had broken through Mr. S.'s mask, and the buttoned point entered the right orbit between the nose and the eyeball. I saw him forty minutes after the accident, and then the right globe was somewhat protruded down and outward. Chemosis and eschymosis of lower ocular conjunction with a slight irregular tear over the body of the right internal rectus muscle. Eyeball immobile, pupil dilated almost ad. maximum, and not responsive to direct rays of light, but acted consensually with the fellow eye. Total loss of light perception of that eye. Ophthalmoscope showed a slight haze of fundus, but not enough to prevent a good view of optic nerve and media. At the end of the first week after the injury the protrusion and displacement of the globe had disappeared, the eye diverged and patient could control all the ocular muscles except the rectus internum, chemosis still remaining. Ophthalmoscope showed arteries and veins normal in size, with no haziness of media. On the tenth day for the first time patient had light perception on nasal side, pupil moderately dilated and somewhat responsive to direct rays of light. At the end of the third week there was well marked begining atrophy of the optic nerve.

The patient has been under my observation ever since the accident; well marked atrophy ensued, but he still retains a small sector of the nasal field, where there is slight perception. Pupil larger than in the fellow eye, and responds fully to direct rays of light. Slight amount of divergence of eyeball, but patient can bring the cornea well on toward the inner canthus.

Ludwig M., aged 24. Was admitted to my service the New York Eye and Ear Infirmary, April 1, 1891. He complained about the blindness of his right eye, giving the following history: At 1 A.M. of the day of admission to the infirmary he was waylaid by a rival and struck over the left eye; with regard to what he was hit with, he does not know, but thinks it was only the fist. For a moment he was stunned and dizzy, but did not fall nor become unconscious, and was led home by the young woman who was the cause of the assault. From the moment of the blow over the left eye he is positive that the right eye became blind. He bled from the nose and vomited blood, which must have been previously swallowed, and suffered from shock. When I saw him fifteen hours after the injury, there was slight abrasion of the skin of upper left eyelid, extending toward the nose, with some œdema of both upper and lower eyelids; movement of the left eye normal; ophthalmoscopic examination showed hyperopic astigmatism (O.D.+ 1.00 cyl. 90 $\frac{2}{20}$).

Right eye totally blind. Movements of the globe normal, no divergence nor protrusion; some conjunctival injection; pupil widely dilated and only responded consensually to light. Ophthalmoscopic examination gave normal fundus. Seventy-two hours after injury ptosis marked, and in ninety-six hours ophthalmoplegic. One week after his admission to the infirmary the optic nerve of the right eye began to grow pale and in three weeks the atrophy was marked. April 15, 1891, two weeks after the injury to his left eye, the right eye began to have some light perception in the upper nasal field, and he could now move eyeball to a very limited extent. Ptosis not so marked. May 11, 1891, six weeks after injury, the movement of eyelid and globe had greatly improved, but there was still slight divergence, pupil not so dilated. Can form a fair estimate of large objects when held about eighteen inches, in the upper nasal field. The atrophy of the optic nerve has increased with the disappearance of the capillaries and total pallor of disc. Since then patient has been lost sight of, and all my efforts to find him have been, so far, unsuccessful.

M. H., 34. I saw patient Oct. 3, 1891, for the first time, when I elicited the following history. He was struck on morning of Sept. 20, 1891, over the left orbital ridge with a lighted lamp, thrown at him by a boon companion. As well as he could estimate, the lamp was thrown a distance of ten feet; the blow dazed him, and he staggered back against a wall of the room, which prevented his falling. He felt slightly dizzy, but had no nausea or other symptoms of shock. In less than one half hour he was asleep. He awakened at 8 A.M. the same day, having slept soundly for six hours, and discovered that his left eye was blind. Patient immediately consulted Dr. Henry Moffat, of Yonkers, N. Y., who found an irregular wound of 1½ inches long extending up and backward from under edge of left eyebrow, likewise a slight abrasion of skin on inner half of upper eyelid. Marked œdema of both upper and lower eyelids, but not much displacement of eyeball, pupil moderately dilated, with total loss of light perception of left eye.

Dr. Moffat saw patient again on the fourth day after injury, when he found the general appearance of the parts much worse. The œdema had increased

and the lower eyelid was everted and very much swollen, with chemosis of eyeball. The eyeball was slightly displaced down and outward. I saw the patient on the 2nd of October (he having been referred to me by Dr. Moffat); œdema of lids had disappeared, eye slightly deranged, with some redness of conjunctiva, pupil moderately dilated which did not respond to direct rays of light, but acted consensually with the fellow eye. Ophthalmoscopic examination showed some pallor of optic nerve of left—but fundus otherwise normal. Vision nil. Right normal in every respect.

Dec. 5th, 1891. Patient presented himself, after an absence of three weeks, when I found the divergence not so marked as on the previous visit, pupil moderately dilated, but there was enough vision regained for the patient to count my fingers at eight feet. Ophthalmoscopic exainination showed more marked pallor of optic; nerve fundus otherwise normal. Dec. 27, 1891, condition remains the same. Jan. 17, 1892. Still able to count my fingers when held about eight feet from his left eye, but the ophthalmoscope showed the atrophy of optic nerve more marked.

Julius S., aged 30. Patient fell from the track of the Metropolitan Elevated Railroad, on the afternoon of the 9th of October, 1891. He was conveyed to St. Vincent's Hospital, when on examination by the House Surgeon, Dr. Shea, there was found blood coming from right ear and nose, left side of head and face contused, with wound of left orbital ridge and patient in a semi-unconscious condition. On the third day after the fall of patient from the track I saw him; he lay in a stupor and when aroused he complained of great pain all over his head. In falling he tried to save his face, so that he struck on the left side of his head. He complained about his left eye, saying that since the accident it had become blind. There was no swelling of the eyelids, the eyeball was slightly diverged, but he could move the cornea well in toward the inner canthus, no protrusion of the globe, pupil slightly enlarged, but it did not respond to direct rays of light, but acted feebly consensually with that of right eye. Ophthalmoscopic examination showed the fundus of left eye normal. No light perception. Right eye normal in all respects, except the pupil was rather contracted. Saw patient at regular intervals and at the end of two weeks there was found by the ophthalmoscopic examination, decided pallor of of optic nerve (left eye). Patient continues under my observation, and now, Feb. 1892, optic nerve atrophy pronounced of left eye. No light perception.

The medico-legal aspect of this lesion is quite apparent and is of considerable importance.

I am fully satisfied that the optic foramina are frequently involved in fractures of the skull, but as most of the severe cases die, this lesion is neither looked for nor recognized. If the autopsy is not carefully made, by removing all the dura mater within the cranial cavity, and this means hard work, a fissure involving the optic foramen easily escapes attention. It has been my lot to see the four cases which comprise this paper within the past two years, which is remarkable from the fact that there are not more than 80 recorded cases in medical literature.

A twenty-five per cent. ointment of resorcin in vaseline is recommended in the treatment of rodent ulcer.

A CASE OF MALIGNANT PUSTULE.

Reported to the Buncombe Co. Medical Society, Feb. 1, 1892.

BY KARL VON RUCK, B.S., M.D.,
OF ASHEVILLE, N. C.

That comparatively rare affections may come to our notice when least expected we all have learned from experience, and it is certainly one of the last of improbable cases that I should have imagined to present itself to me, the more so, as I am not engaged in general practice.

Nevertheless, on Dec. 8th, a patient who has been under my care more or less for the last three years, on account of his pulmonary affection, called upon me with the following statement: on noon of the day before, he noticed a spot on the inner aspect of the first phalanx of the fore-finger of his left hand, looking like a flea bite, which attracted his attention on account of severe itching; by evening a vesicle had formed surrounded by a red areola, and a burning, stinging sensation was also present; the finger and surrounding parts had become slightly swollen.

The patient presented himself the following morning, calling my attention to his finger. The vesicle was now about three-eighths of an inch in diameter, the elevated epidermis was of a dark discoloration and gangrenous, the base was indurated, and spontaneous rupture of the vesicle had occurred, a serous, pink-colored fluid discharging, so that a drop could be collected every five or ten minutes.

The first phalanx of the finger, the phalango-meta-carpal joint, and the hand were distinctly swollen, the skin presenting a red blush, the vesicle had a stinging, burning sensation, the whole hand to the wrist pained him, the local temperature of the hand was distinctly increased to the touch; there were, however, no general symptoms, unless a temperature of 99.5° F., could be so interpreted.

The patient was in my office from 9:30 to 1 o'clock, and the swelling and size of the vesicle had undoubtedly increased; a very minute vesicle, independent of the larger one, which was not present in the morning, was now observed at the edge of the indurated base. Eight years ago, in the Hygienic Institute in Berlin, I saw experimental inoculations of guinea pigs and rabbits with anthrax bacilli, and within the last few months, I had reviewed the subject of anthrax in connection with some bacteriological studies—but for these circumstances, I should perhaps have had no suspicion of the serious character of the nature of this case.

From what I remembered, the probability of malignant pustule at once occurred to me, and my inquiries only served to strengthen the suspicions, while the local appearance and the history given by the patient conformed entirely to descriptions of my available, and promptly consulted medical literature.

I suggested the propriety of consultation, which was readily concurred in by the patient, in the meanwhile subjecting the discharging serum to microscopical examination, with, however, negative results. While my consultant could not be more positive than I was myself, it was determined to endeavor to make a culture from the discharging serum, and to promptly and thoroughly destroy the vesicle and its base with fuming nitric acid. This was done accordingly, and the patient allowed to return home with instructions to return or send for us, should general symptoms, which were explained to him, occur.

Before the application of the nitric acid, two large drops of the discharging serum were collected upon sterilized slides and put into a moist brood-oven as hanging drops, with a temperature of 100° F.

In three hours one specimen was removed and examined, and the characteristic growth of the anthrax bacillus left no further doubt of the diagnosis. The bacilli were present in various stages and phases of development, some grown out to long rods, others shorter, and in some upon the periphery, where in the brood-oven the drop had slightly dried, the rods were quite short; subsequent experiments with the specimens gave similar results.

The patient returned the following morning; the swelling had greatly subsided, a dry eschar having formed where the acid had been applied. Nothing further occurred, the swelling had all disappeared by the second day and healing resulted promptly.

There is, gentlemen, no reasonable doubt, that this case was one of anthrax, but much obscurity and doubt exists, as to how and where the infection occurred. I am not aware of the disease prevailing in this locality among cattle.

The patient had recently been engaged in handling and buying cattle and the same day and the day before the pustule appeared on his finger, he had also cleaned out with his hands, the mangers in his cattle barn. He also stated that one of his horses had an ugly sore on his head where the bridle comes in contact, and he had handled the sore and the bridle.

None of his cattle died before[1] or have become sick since, and, altogether, the origin of the pustule remains more or less a mystery.

The lesson we can all learn from this case is, as I stated in the beginning, that although living in a small community, we may at any time, be confronted with unexpected and infrequent affections, possibly of the gravest character, which, if upon them we are indifferently or not at all informed, may possibly terminate fatally, before we can be set right in our diagnosis.

It teaches us the necessity of frequent reviews of subjects, which have apparently had only general interest in our previous study, and also the great importance of familiarity with microscopical and bacteriological investigations.

ALCOHOLISM A DISEASE.

BY A. ENFIELD, M.D.,

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The day of medical theories, which do not have established facts to justify them, belongs to the past. It has taken ages of observation and investigation, by the greatest intellects of the profession, to elevate the science of medicine to the high position it now occupies. We live in an age of light and knowledge, an age in which old isms, theories and fallacies, are fast disappearing before the sweeping progress of this century.

The past decade has given us the beginning of a new epoch in the science of life. Medical science is now called upon to defend our bodies from the parasites which prey upon us from without, and physiological and chemical research has taught us the therapeutic application of drugs in the cure of dipsomania and kindred diseases.

The power of self-regeneration is one of the great distinctive properties belonging to all organized living bodies; but the moment we commence to live we begin to die. Molecular changes may be increased or retarded by various foods and drugs, taken into the system at stated periods. We apply the term hunger to that peculiar want felt by the human system for food, a sensation (when not too prolonged) by no means disagreeable, and one which is often excited by the sight or smell of a savory dish.

It is true that the taking of food is influenced in some degree by exercise and habit, as well as by the sense of hunger, and if our systems are not supplied at regular intervals by this nourishment, the sensation of hunger becomes so great that we suffer great pain and distress.

All the elements necessary to nutrition (except oxygen and light) can be taken into the system by the mouth, and if it were not that there comes a time in the history of every organized body, when the tissues fail to appropriate sufficient new material to repair the waste, we would continue to live forever. Death is therefore a physiological necessity. Therefore, there is no such a thing as true euthanasia. But it is the duty of the physician to secure for man such good health as shall bear him, in activity and happiness, onward in his course to the goal. Good health and happiness can be secured by living in obedience to the laws of health. When the medical profession succeed in teaching the world how to live in a proximate physiological, normal condition, then they have reached the consummation of their calling.

Fifty years ago there was not a medical college, in Europe or America, that had a special chair of neurology, whereas to-day there is not a school that has not at least one such chair, and some schools have two, or even three professors who are giving their whole time and attention to discoveries and advancements in this important branch of medical science.

It is therefore gratifying to the American student of scientific medicine to note the amazing progress that has recently been made in the discovery and cure of nervous diseases, especially by American neurologists.

It was our own beloved Rush who a century ago stood as the great pioneer (in advance of all the world), to describe and clearly demonstrate the future of this branch of medical science. It was men like Rush, Pinel, Brown-Séquard and others, who taught us that insanity is a disease, and not the devil in man, as was generally supposed prior to their time So that to-day, while medicine is advancing all along the line, in no other department has there been such advancement as in the discovery and treatment of nervous diseases. Advancement has been so rapid in this special department of medicine, that some writers claim that all diseased manifestations are but the result of nervous shock.

Vesalius took his own life in his hands when he was brave enough to sharpen his scalpel for the first dissection on the human body. Galen followed, and taught us that the arteries contained blood and not air, and Harvey showed us how that blood circulated. Jenner, Pasteur and Koch have been bold enough to transfuse the very elements of chemistry into our blood, in order to kill the myriads of germs that infest our organisms, and produce disease and death.

[1] It has since come to my knowledge, that a cow died suddenly in his herd a month or two before the occurrence of this case.

By the aid of physiology and chemistry, we have used the elements around us to cure disease and prolong life. The great labors of the past are but now beginning to bear their fruits. Alcoholic neuritis is no longer considered a habit, but a disease; as much so, indeed, as insanity.

The old fogy element of the profession may cry out against this new departure in the treatment of a disease; but it cannot stem the tide of scientific progress when the world can see the results and witness the benefits to mankind. The *secum lumen*, the great light, will open the eyes (the old fogies), as the noon-day sun opened the eyes of the scoffers of Jenner. If one poor soul can be saved, who dare cry against the cure of a disease that cuts down youth in his vigor, manhood in his glory and strength, and age in his weakness; a disease that has produced more misery, sickness and death, than all other diseases combined?

It is an insult to medical science to say that all the brave and good men who have killed themselves with alcohol and opium did so just from habit. Tell me that all the men of genius whose lives have been wrecked and ruined by these drugs were led to their use by mere accident? Impossible. These men fought like heroes against their disease; and for these diseases they are not responsible.

The day has come, in the fulness of time, when we can say that this disease, that has destroyed so many, shall destroy no more. Thousands of human beings are being rescued from the destroying influence of these diseases, and thousands and tens of thousands are yet to be saved from an untimely death.

Every new advancement in the science of medicine is met with a storm of opposition. Dipsomania must be recognized as a disease, and not as a habit. Until recently, the medical profession have neglected to examine this subject carefully from a physical point of view. They must examine this subject as they examine any other ailment, if they wish to reach a satisfactory conclusion.

It is not the intention of this article to begin a controversy with those who honestly believe that inebriety is the result of habit alone. Inebriety is no more due to habit, vice and sin, than is insanity. If inebriety is a disease, then its cure rests with the physician; if it is wholly a sin, and man is entirely responsible for his appetite, then his treatment and salvation must come from those who claim it is a habit.

A Christian will be a better, a brighter and a happier Christian, if we can remove this appetite for stimulants and give him a healthy stomach. An ounce of cure is worth a pound of prevention, if applied at the proper time. Thousands have been crying for help from this dreadful disease, while theorists have been talking and preaching and splitting hairs, as to whether it is a moral or physical evil.

The word habit, like the word malaria, is a convenient word with which to explain something we know nothing about.

Conversion, change of heart and the grace of God, are great moral helps, but they cannot cure a diseased nervous system, nor a depraved stomach. The moral side of intemperance has been proclaimed for ages, and yet statistics show that inebriety is on the increase.

On this subject, the medical profession have remained silent entirely too long, and have allowed the moralists to advance their own views in the matter, without any scientific examination of its cause, its nature, its character or its curability. We must admit that the moral agitation of the subject has done much good, but still there is something wanting. The removal of alcohol does not remove the craving, but rather increases the appetite for it.

If we cannot cure the inebriate by the application of drugs scientifically applied, we shall never be able to cure him by forced abstinence. Public opinion may deny this, and opposition may come from every superstitious person in the land, but that will not frighten the conscientious and progressive physician, who has science, experience and results to support him. He must go patiently on, and look beyond the present opposition of the incredulous and skeptical public, until he has worked out the physiological and pathological condition of the inebriate, and restored him to health.

Man is a complex animal, full of variations, and easily influenced by any change in his nerve centers. His call for stimulants arises from a loss of nutrition to some part of the central system, just as the call for food arises from the same cause. Therefore, it is impossible to cure this morbid craving, which has its seat in the brain, without first removing the cause by appropriate medication.

The inebriate may be anxious to quit the stimulant, but the moment he makes the attempt, his diseased stomach and brain give notice that they must have something to nourish them.

It is not within the scope of this short article to analyze and examine the many predisposing causes of this disease, such as heredity and non-heredity, occupation, etc., or we might present many facts and data that would help to determine this question, outside of any personal or social feelings, or opinions we may entertain.

There is no subject that should receive more interest, or more attention from the profession than the subject of inebriety; and yet in the past we have allowed the laity to do all the thinking, writing and legislating on the subject. It is time to call a halt. The physician is certainly better qualified to investigate the subject, and to pass his judgment on it, than those who have never examined it from a scientific point of view.

While I have myself devoted years to the special study and treatment of this disease, examined the different systems of treatment, [the old and the new] seen successes and failures [under restraint and non-restraint], treated with drugs and without drugs, yet I feel that we have but commenced the study of a disease whose future is full of important information, and of which there is yet much to be learned. We should never allow ourselves to be carried away by the enthusiasm which naturally follows successes, nor be discouraged by failures.

I care not whether the treatment originated with Dr. Keeley, or Dr. Somebody else. If his treatment produces good results, we ought to use it; if not, we ought to search for something better. It is not creditable to the profession to detract from a reputation made by the medicine or systems used by another, if their compositions are made known.

The same general principles apply in the treatment of this disease that apply in all chronic nervous diseases. Physical laws and forces are the same in all individuals. The system broken down by long years

of dissipation, cannot be relieved by any one drug or combination of drugs alone, but by building up the whole body by special diet, baths, exercise, electricity and good hygienic surroundings.

In my hands a combination of drugs has proved most beneficial. Each and every case must have special treatment according to the symptoms manifest.

No doubt chloride of gold possesses wonderful alternative properties, and when properly and systematically given in combination with strychnia, atrophia, cocoa, quinine, sulphonal, and codea, they have a tendency to change the habits of the system and remove the diseased condition of the nerve centers and allow nature to return to a normal condition.

These powerful drugs, when given for a long time, so profoundly influence and build up the nervous system, that the inebriate feels strong and well, and gradually acquires as much repugnance for stimulants as he before had an appetite for them. The treatment breaks or removes the cause of the disease, and the inebriate starts in a new career of life. Of course he may relapse, as he may from any other nervous disease. Anything that tends to exhaust the brain, or lower the vital forces predisposes to a return of the disease.

The individual should live a life free from excitement, annoyance and worry, eat wholesome and substantial food and be constantly under the observation of a physician. Physicians who are familiar with the modern treatment of inebriety do not condemn it: but they rightfully refuse to endorse nostrums of which they know nothing. The general practitioner has not the time to devote to the treatment of these cases. He might as well attempt to treat all his cases of insanity.

Specialists have explored the grounds, investigated the disease and formulated the treatment, and are therefore more competent to handle such cases successfully. Nor is it advisable for the patient to treat himself. Most drugs that are of any value in this disease would prove dangerous in his hands. Besides, the most of the treatment must be given hypodermically, which an unskilled person cannot use.

My reason for dwelling upon the neurological and pathological aspect of this disease, is to call the attention of those outside of the medical profession to the great advancements that have been made in this special department of the healing art. The world is too apt to look with disfavor upon any new discovery that is invisible and incomprehensive to the common mind.

They grow wild over the graphophone, the telephone or electric car, but fail to realize the subtle and invisible agents that science is using to cure man. In conclusion, we may then state with perfect confidence, that inebriety is a disease and not a habit, and being a disease is therefore curable; and in order to intelligently treat it, we must study the nature and character of the disease as it manifests itself in different individuals. We must approach the subject from the physical, and not the normal side of the case. We must discard any preconceived notions and theories not based upon facts. The success of the new treatment has opened up a promising future to all who may investigate the subject.

Now that the smoke of battle following the conflict of the able article in the *Review* (on both sides of this question) is clearing away, we trust that the discovery of this new disease and its successful treatment may be judged fairly and honestly by the physicians.

The science of medicine has commenced a new war against an old but recently discovered disease. Have effectual and successful remedies been found for this disease? To this we answer, yes. When the details of the methods and remedies now used are perfected by further experience, and their capabilities and limitations more fully tested by the medical profession.

The public should not expect them to prove infallible. The best that can be expected in any disease is that it will cure the majority of all the patients to whom it is properly administered, and this is just what this modern treatment has done in dipsomania. The deliverance of humanity from this terrible disease will mark a new epoch in the science of medicine.

Facts are the basis of an infinite wisdom that never errs. The discovery of every new truth in medical science marks its advancement over past ages. New discoveries spring up with such rapidity that in the busy routine of professional life we have scarcely time to sift, weigh, and analyze their value for good or evil. By the selfishness of our natures, we are more prone to condemn, criticise, than to praise.

President Garfield once remarked that he was always struck with awe when standing near the ocean and seeing the waves lashed into fury and tossed into spray. Its grandeur would move the soul of the dullest man. But it was not from these billows, but the calm level of the sea, from which all heights and depths, lengths and widths, are measured. And so in the conflicts of science like the waves of the ocean. One follows the other, and after a moment's existence each one in turn is overwhelmed by the one that follows, and both are merged into the past. But human thought differs from the waves of the ocean in this: that we advance in wisdom and knowledge, and that an occasional wave is thrown so far out that it will never recede, so that the eyes of the whole world can behold the progress that has been made to save and prolong human life.

The medical profession is progressing, not only in the United States, but in England, Germany, France, Italy, Spain, Belgium, and the islands of the seas. This century has had its Virchow, Pasteur, Lister, Esmarch, Tait, Billroth, Paget, Koch, Simms, Morton, McDowell, Gross, Pancoast, and Agnew.

DIAGNOSIS OF PNEUMONIA.

Read before Chicago Medical Society, February 15, 1892.

BY JOSEPH M. PATTON, M.D.,
PROFESSOR OF INTERNAL MEDICINE IN THE CHICAGO POLYCLINIC.

There is nothing especially new to be said on the subject of the diagnosis of pneumonia. The symptoms, both subjective and objective, upon which the diagnosis of a typical case of the disease is to be based are so familiar to you all that it would be superfluous to enumerate them, and yet the difficulties of making a correct diagnosis, which are sometimes present, remind us that the clear clinical picture as depicted in our text-books is at times widely departed from in clinical fact.

Let us make a brief comparison of relative diagnostic merits of the symptoms which present.

Some diagnostic importance is to be attached to

the facies of the disorder. The anxious countenance, combined with the pneumonic spot over the malar prominence, the mahogany color which this spot may assume, and which may be an early objective sign, are at times characteristic. There is also a peculiar heavy, sweetish odor to the skin and expectoration, which to me is, at times, quite diagnostic.

The Chill.—The diagnostic importance of the chill lies in its being the initial symptom; in its violence, and in its not being repeated, it is more active than in any other disease except intermittent fever and septicæmia. *Per contra* 25 per cent. of cases do not exhibit the chill, and in senile life 60 per cent. may omit, or at least exhibit it only to a slight degree; a slight protracted chill, perhaps pain, great prostration, with fever, often constituting the first evidence of acute senile pneumonia. In children the chill is often absent, its place being taken by gastric disturbances and nervous manifestations.

Temperature.—This is of importance in that it rises suddenly, and in two or three hours attains as great a height as it may during the disease. The daily oscillation of from ½–2° may be of service in distinguishing from the gradual rise of typhoid, its rapid declination to the normal or below at the period of crisis may become diagnostic in cases not seen earlier.

The Respiration.—Is diagnostically important in its great rapidity, its independence of the pulse rate, and of the amount of lung tissue involved. It is also not in accordance with the pain or temperature. Its *panting* character is peculiar to pneumonia. Speech is short and jerky, interrupted, as expressed by Niemeyer, contraction of the levatores alæ nasi cause dilatation of the alæ nasi, which is peculiarly noticeable in children. The difference between the pulse and respiration in children is not so marked as in adults.

Dyspnœa.—Is of no diagnostic importance. It may or may not be present. Indeed, its absence, with a rapid respiratory rate, is diagnostic. When present it is panting in character and does not relate to the amount of lung tissue involved. It is apt to be greatest where there is grave nervous disturbance in secondary and complicated pneumonias and in children. In old age it is rarely present, even with a breathing rate of 60 or 70; here its *absence* is important.

Pain.—Pain is present in 80 per cent. of the cases over the affected lung. Its diagnostic importance rests in the fact that it disappears in one or two days, provided that pleuro-pneumonia is not present. It is absent in central pneumonias, in pneumonia of the upper lobes or apex, and in senile pneumonia it is not severe, or is entirely absent.

Cough.—Cough is present in the great majority of cases except in old people. It is one of the earliest symptoms, hacking in character, and most persistent in children. The muscular effort required in coughing may cause great exhaustion.

The Expectoration.—The expectoration furnishes one of the characteristic evidences of the disease. It is at first frothy and light colored, later becomes viscid and tenacious, but never opaque (Loomis). It then becomes of the well known rusty hue or prune juice color, depending on the quantity of blood in it, or according to Jacksch, to dissolved hæmoglobin. It may be grass green in color, due to conversion of hæmoglobin or hæmatin into bilirubin, which in turn is oxidized into biliverdin. The stickiness of the sputum is characteristic, and when removed from the mouth in the folds of a cloth, upon separating the folds of cloth the sputum will stretch out into a thin film which is quite elastic. Chemically the sputum contains albumin, mucin, sometimes tyrosin and sugar. It contains more potash than catarrhal sputum and less soda, and no alkaline phosphates as compared with 12 per cent. in catarrhal sputum. Pneumonic sputum is acid in reaction, due, according to Verdeil, to excess of pneumic acid; according to Bamberger, to deficiency in alkaline phosphates. Microscopically the sputum contains, besides the different elements derived from the products of consolidation, red and white blood cells and fat granules. According to Walshe pus cells are not found in brick-dust sputum. Various organisms may be present, of which the pneumococcus of Friedländer has been regarded as to some extent diagnostic, but at present it is generally considered that various microörganisms may have some influence in producing the disease; at least the presence or absence of this diplococcus has not obtained any particular diagnostic significance. While a careful analysis of the above emphasized elements of the symptomatology may go far towards making a diagnosis, it is to the physical signs that we look for positiveness.

The classical physical signs of the disease are so familiar to you all, that it would be tiresome to enumerate them in order.

Let us note the comparative value of the different signs elicited by the different methods of examination in the different stages of the disease.

Inspection.—During the first stage inspection will show nothing, for if there is slight loss of motion it may be due to pain. During the second stage there will be slight or considerable loss of motion depending on the amount of tissue involved, with a corresponding compensatory action of opposite side.

In double pneumonia of base of lungs the action of the diaphragm is diminished, and the respiration is costal in type. Increased action of the heart may be noticed. During the third stage, returning expansion of affected portions is observed.

Palpation.—Except as a method of determining the expansion, palpation is of little value during the first stage, as the slight increase in vocal fremitus during that period is not diagnostic. It is important when obtained; it is most marked in consolidation of upper portion of lungs, may be absent in double pneumonia of lower portions in senile pneumonia, in moderate sized central consolidations, and in very extensive consolidation of one lung. Vocal fremitus in these instances may even be less marked than over the healthy lung. Pulsation may be felt over the inflamed tissue, attributed by some to arterial pulsation in the engorged lung, and by others to transmission of the heart impulse; the latter is probably the most frequent cause.

Percussion.—Like palpation, percussion is of practical value only during stages of consolidation, the slight dulness during first stage being readily confounded with slightly modified percussion pitch from other causes. Dulness is most readily obtained in apex pneumonias, and less so in central consolidations. It is more marked posteriorly than anteriorly. There is more resistance to the percussion stroke in pneumonia than in any other form of consolidation. A lower pitched note is obtained around the consolidated portion, and from the uninvolved lung tissue.

this may be slightly tympanitic; with extensive consolidation a tympanitic note may be obtained over a large bronchus; a cracked pot sound may also be obtained from the same source.

With extensive basic consolidation the tension in the vesicles of the corresponding apex may be increased sufficiently to give an amphoric quality to the percussion note.

Auscultation.—The most diagnostic physical signs of pneumonic consolidation are furnished by auscultation. Auscultation of the voice during the first stage gives a higher pitched exaggeration of the voice, which is louder and more plainly heard. It has always seemed confusing to me to use the term "increased intensity" as applied to this condition, as compared to its use in relation to the low pitched percussion note. Exaggerated voice sounds may be heard over a healthy lung where the tension of the tissue is increased and its elasticity lessened by the greater quantity of contained air, and also over tissue whose elasticity is lessened by vascular engorgement. In the former case the pitch is lower than in the latter.

During the second stage bronchophony is obtained, provided the bronchus is patent; according to Traube it may be heard during the first stage. Pectoriloquy may be heard where a bronchus is patent almost to the surface of the lung. Œgophony may also be heard. Voice sounds are modified by old age, rigidity of chest wall, emphysematous, asthmatic, and other modifications of the normal condition of the lungs.

Auscultation of the Respiration.—Respiratory auscultation is a most important means of diagnosing pneumonia. During the first stage the murmur is dry, harsher, slightly higher pitched, especially the expiration. During the latter portion of this stage the crepitant râle is to be heard. Much has been said for and against the position assumed for this râle in the diagnosis of pneumonia. Loomis says they are usually pleuritic crepitations, and yet assumes for it a position relative to diagnosis not to be obtained by any pleuritic friction, and directly contrary to that opinion. The true crepitant râle comes only at the immediate end of inspiration in a burst of fine crepitations, producing a sensation to the ear similar to that on the eye produced by certain pyrotechnic displays which burst suddenly at a height into numerous and distinct bodies of light. There are pleuritic crepitations so closely resembling these as to be difficult, or perhaps impossible, of distinction; pneumonic crepitation is present in inflammations which do not reach the pleural surface, and when pleurisy will not explain their presence.

Pleuritic crepitation is of slightly longer duration, and does not produce so markedly the sensation of numerous crepitations instantaneously produced. While it may be difficult to always distinguish between these sounds, I do not think we are warranted in dismissing crepitation as a classical sign of the first stage of pneumonia. During the second stage bronchial breathing is the classical auscultatory sign, heard at first only during expiration; later on, both during expiration and inspiration, high pitched, blowing or harsh in character. In basic or central inflammations it has the sensation of being produced at a distance, and is not so harsh as in pneumonia of the apex; it is generally obtained better behind than in front. In consolidation of upper or middle portion of lungs it is most marked at the superior angle of, or between, the scapulæ.

Laennec considered bronchial breathing due to better conduction by solid tissue; Skoda, to vibration of air in bronchi of condensed tissue in consonance with that in trachea, the solid walls around pent-up air in bronchi reflecting vibrations better.

During the second stage the heart-sounds may be heard at distant portions of chest with increased distinctness; râles from accompanying bronchitis (Skoda's consonating râles) may be very distinct.

During third stage, the gradual return of normal signs with subcrepitant râle or râles redux from liquefaction of products of consolidation form the only important signs.

Differential Diagnosis.—The diseased conditions with which pneumonia may be confounded will depend on the stage at which the diagnosis is made.

During first stage from la grippe, œdema of the lungs, pulmonary congestion, acute pleurisy, and hypostatic congestion. In la grippe the chill (if there be one) is not so severe; the temperature may be as high, but the pulse is generally faster, though it may assume the peculiar independence of pneumonia. The whole face is flushed, and the eyes have a feverish instead of anxious look. The breathing is slower, and not panting. I have found it difficult in some cases, both of pneumonia and la grippe, to make a diagnosis until time for the development of physical signs had elapsed. Chronic œdema of lungs arises during the course of other affections explaining its presence.

Acute œdema arising from cerebral injuries, irritation of the par vagum, or after other acute diseases may be mistaken for pneumonia, but the dyspnœa is greater, the breathing more noisy, expectoration frothy and serous or blood-stained, if with congestion; the râles, which may be indistinguishable from pneumonic crepitation, will be accompanied by larger bubbling râles, usually through both lungs, while pneumonia is usually unilateral; there is also absence of chill and fever.

In low continued fevers crepitant râles may be heard at base of lungs, due to congestion; they are bilateral with no marked dyspnœa or dulness.

Acute pleurisy begins with varying chills, temperature below 101°, cough dry and irritating, pain severe, expectoration slight and mucus, face pale and anxious, pulse small and tense, breathing catching; may get friction sound limited to very small area, while in pneumonia face is flushed, breathing panting, pulse full, temperature high.

Hypostatic congestion occurs in enfeebled subjects, in bedridden people, in lowest portions of lungs. May disappear with change in posture, is accompanied by no fever, has copious watery or bloody expectoration.

Meningitis in children may also be mistaken for pneumonia with cerebral symptoms. In meningitis the temperature does not go so high, as a rule, its advent is more insidious, pulse lower, no dyspnœa, face pale and distressed.

During second stage, pneumonia may be confounded with pulmonary infarction, pleurisy with effusion, acute phthisis, and lobular pneumonia.

Pulmonary infarction is connected with cardiac disease or pyæmia. There is no fever; sudden and intense dyspnœa is its main feature, the expectoration is red or black coagula of blood, there is limited circumscribed dullness surrounded by moist râles, there may be great pain, the breath has a peculiar odor.

While in typical cases the differentiation of pleurisy with effusion from pneumonia is easy and familiar to all, there are cases where it may be mistaken.

In limited encapsulated effusions with connecting bands of tissue, there may be loss of motion, no distension of inter-costal spaces, dullness, increased fremitus, increased vocal resonance, high-pitched respiratory sounds, bronchial râles heard over the location of the fluid. These modifications may be entirely due to the thickened pleuræ and localized bronchitis, and are difficult to distinguish from basic pneumonia of insidious advent. In copious effusions there may be marked compression of lung without protrusion of intercostal spaces, and bronchial breathing will be heard at the lower angle of left scapula. This may be mistaken for extensive pneumonia when there is not enough air in the lung to give any signs except over a large bronchus.

Per contra this latter condition may give such a paucity of physical signs that pleurisy is suspected. In senile pneumonia especially there may be consolidation of almost an entire lung which will not furnish one classical sign of the second stage except dullness. There is simply not enough air contained in the bronchi of the affected side to produce any vocal or respiratory sounds. Apex pneumonia may be confounded with acute phthisis. The characteristic symptoms and course of the affections are widely different, but the two conditions may be blended in such a manner that only the subsequent course of the disease will clear up doubt.

Lobar pneumonia in children is at times confusing. There is no chill, it is a secondary affection, is apt to be present in both lungs, and the physical signs are confined to circumscribed spots.

The third stage of pneumonia may be confounded with capillary bronchitis. The râles in the latter are heard all over one or both lungs, while in pneumonia they may be confined to a limited area in one lung.

In bronchitis the expectoration and temperature range are different. There is no dullness or morbid changes in voice sounds, breathing is labored, and there is more cyanosis. Senile pneumonia with typhoid symptoms, if not seen until late in its course, may be difficult or impossible to diagnose from typhoid fever; at an earlier period diagnosis is made from the relative sequence in the development of the physical signs of pneumonia and the symptoms of typhoid fever.

While in a case of pneumonia exhibiting the prominent symptoms in regular order there can be little or no difficulty in diagnosis, there are many cases where only careful consideration of all subjective and objective symptoms will prevent error. In some instances the subjective symptoms, which are very prominent in the beginning, will subside early in the case, and the patient who felt very ill when nothing physically wrong could be demonstrated, will now feel comparatively comfortable when everything wrong with the lungs is apparent.

The so-called typhoid pneumonia and bilious pneumonia are forms of the disease which have given rise to much discussion, both as to application of the terms and symptomatology. The term typhoid pneumonia has been rather indiscriminately applied to a variety of conditions with which a low form of pneumonia may be associated as a complication. The proper application would restrict it to that form of inflammation of the lungs which exhibits typhoid symptoms, and marked by rapid depression of vital power. A pneumonia complicating or following typhoid fever may be, but not necessarily so, a typhoid pneumonia.

Nervous symptoms are especially marked in typhoid pneumonia, more so than in any other, except apex inflammation in children.

Recovery is more protracted than in any other form of pneumonia. Bilious pneumonia is a form more common in the Southern States than in this latitude; it is characterized by gastric and hepatic derangements, and is considered by some to be of malarial origin. It is apparent that inflammation of the lungs occurring during the course of remittent fevers, or congestion or collapse of lung tissue during malarial fevers, might be erroneously classified as bilious pneumonia.

The terms typhoid and bilious as applied to pneumonic inflammation are not sufficiently accurate or expressive of a definite phase of the disease to merit a place in the nomenclature of pneumonia.

SOCIETY PROCEEDINGS.

American Electro-Therapeutic Association.

First Annual Meeting of the American Electro-Therapeutic Association, held in Philadelphia, September 24, 25 and 26, 1891.

(*Concluded from page 266.*)

Ephraim Cutter, M.D., LL.D., President American Branch Society of Science, Letters and Art, of London; Corresponding Member Belgian and Italian Microscopical Societies; Physician-in-Chief Heartrest Sanatory, New York, read a paper on

THE GALVANO-CAUTERY; ITS USE IN REMOVAL OF PILES AND GROWTHS.

Galvano-cautery is employed to remove growths without bleeding, and generally with complete and perfect cure. That is, malignant growths are not apt to recur on site of removal; they may occur elsewhere.

The tissues heal healthily, so that it is difficult at times to tell whence the growth has been removed.

Principles.—1. Have a good battery; if a storage battery, test it well as to connections beforehand.

I use heavy conductors of pure silver; these are less bulky and more flexible than copper. Carbon and zinc plates variously connected so as to be portable, and not break; to have broad connections, with as few breaks as possible.

In the ordinary coupling with screw and socket there is not a typical connection. The connection of batteries should have broad surfaces coming in close contact, flatwise; in the ordinary screw coupling the contact is linear and tangential.

Cam coupling. These I like, for they do not easily come apart. Screw couplings get loose almost invariably.

Cautery holder. Mine is very simple.

First, a tinsmith rolled up a piece of tin into a tapering tube 6 to 8 inches long, one-fourth inch in diameter at one end, and one-sixteenth inch at the other. Two such tubes were mounted on a glass window plate 4 inches long, one and a half at one end and one-half inch at the other end, by flanges of tin riveted through the glass, or held in place by India-rubber bands. The primitive tinman's appliance I have would convey more current than the brass and nickel-plated one made by the surgical instrument makers.

To use it: Simply run the ends of the conductors into

the large ends, crowding them in so as to hold. Before this application, a fine platinum wire 12 or 16 inches long is run through the large end of one tube, out of the small end, then through the small end of the other tube and out of the large end. This wire can be fixed by simply bending the free end outward sharply over the tube.

Some principles about the wire:

a. It must be small.

b. It is not an écraseur. Platinum is not strong enough to cut tissues, and iron wire does.

c. Simply draw it in contact with the tissue, then pass the current by a switch; or better, by nipping the plates of the battery in the solution.

d. Stop the current when things are getting too hot. There is no need of the adjacent parts being burnt. Besides, slow and broken applications allow of the sealing of the blood-vessels, so as to avoid hæmorrhage. Rarely do I have a hæmorrhage.

e. After things have cooled, draw gently one end of the platinum wire and take up the slack, and fix by a sharp turn over end of tube. You are then ready for another application of the current. This letting the wire cut its way by burning is much different from cutting as an écraseur. In the method here used there is no disturbance of the adjoining parts. With the écraseur, all the surrounding tissues are drawn in more or less, so that more tissue is taken in than needed. In the method here used there is no indrawing of tissue, and no taking more than is required. Important repetition.

f. Another thing, the wire must be hot. A white incandescent is the best.

The connections of the battery are so arranged that they cannot come in contact with the fluid. This is done by the battery being shorter than the plates.

It is a good plan, after use, to wash cell and battery thoroughly in water and then to dry, before restoring plates to cell.

The fluid best for battery is saturated solution of bichromate of soda with sulphuric acid, 1 oz. to 11 ozs. of solution. *It should be cold.* Battery works best while cold.

The potash salt is used the most, as it is the cheapest, but it does not dissolve so well as the soda salt.

Anæsthesia.—This is not always needed, as, if the wire is properly heated it destroys the nerves as it burns, with little pain.

Case 1.—Mrs. ——, cauliflower tumor of vagina. This was a growth with a sessile base, and an umbrella expansion much like a mushroom. The site was 1½ inch within the vagina. Case had been said to be hopeless. Age, 74 years. The growth was removed by the galvano-cautery so that the site was smooth and flexible as the cheek under the zygoma. There was no recurrence at site, but disease involved the uterus, of which patient died four years later. So that life was prolonged to this extent. Anæsthetic used. No hæmorrhage.

Case 2.—Mr. ——, 1875. Dense piles surrounded the whole anus, which were painful and sore. An anæsthesia. Three-fourths of the periphery were burnt off with the wire. No hæmorrhage. One pile that made up the remaining fourth was removed with the écraseur to see if the mode of ablation made any difference. It did make a great difference. Whereas those sites where piles were removed by the galvano-cautery immediately healed, and were absolutely painless, the site of that removed by the écraseur was painful and a long time in healing. The subject said he wished the whole had been burnt off. The piles have never returned.

Case 3.—Mrs. ——, aged 65. Cauliflower growth right popliteal space; another just above the right breast. Both these were removed by the small battery referred to above, two years ago. They have showed no signs of reappearance and their sites are hardly discernible. No anæsthesia.

Case 4.—Mr. ——, husband of foregoing case, seeing her growths removed so easily, at his wife's request showed me a tumor over the spinous process of the third cervical vertebra. It protruded like the last joint of a man's thumb; was dense and hard; not painful. I cut it off. The case did well. The site is almost invisible, flexible, and there is no disfigurement by a scar. No hæmorrhage; no anæsthesia. Had I been prepared for this case it would have been more expeditiously performed.

Case 5.—Mrs. ——, aged 78 years; 1879. A hard, angry-looking tumor of the size of a split pea on the right upper eyelid. It was mobile and somewhat painful. This was removed by the small battery. No anæsthesia. It healed up so well that there was no scar or mark to indicate its presence, in two weeks. Considering the age of case and the location it seems as if this was good surgery.

Case 6.—Capt. ——, aged 60; 1891. A small growth on chin, ugly-looking, and increasing in size. Operated upon in office. Small battery used. Cocaine anæsthesia. Three weeks later could find no scar nor trace of operation.

Case 7.—Miss ——, aged 42; 1891. Voluminous and sensitive piles. Patient came under ether badly; had to give chloroform before anæsthesia was effected, and then patient tumbled and kicked so as to interfere with operation seriously. This was not done to entire satisfaction, still the final result was good and the parts resumed normality.

Case 8.—Mrs. ——, aged —; 1882. Cancer of left groin; was assisted by Dr. William G. Wheeler, of Chelsea—Nature's nobleman. Tumor large as a hen's egg. Anæsthesia. Operation difficult, because of the sessile nature and cancerous lymphatic glands of the groin. Still I succeeded in removing it, and the upper margin of cavity contracted so much as to cover the burned area well. It healed well; but the disease recurred in right poupart's ligament and womb and destroyed life.

With these few cases I close this paper, trusting that the fellows of the society will another year report more cases. It seems to me that this operation is almost an ideal one for piles and small growths.

Dr. A. H. Buckmaster, of Brooklyn, read a paper entitled

A CASE OF RETRO-FLEXION AND CYSTIC DEGENERATION OF THE OVARIES TREATED BY HYSTERORRHAPHY UNSUCCESSFULLY AND CURED BY ELECTRICITY.

In reporting this case, I have nothing startling or even novel to offer the society. It is the same old story of a case that has undergone a serious surgical procedure to be finally cured by one unattended with risk. The patient was a young unmarried woman. In 1887 she complained of pain in the side and abdomen, and in locomotion, and in 1888 she became an invalid. There were no elements of a hysterical nature in the case. In 1889, she fell into the hands of a distinguished specialist of this city, and he found much enlarged and cystic ovaries and retroflexion. This gentleman treated her for some time with but slight improvement, and finally made an explorative incision and stitched the uterus to the abdominal wall. The tubes were normal in size and they and the ovaries were left, as the patient had specially desired that they should not be interfered with. She remained under treatment after this operation for a year, and at the end of this time there was little or no improvement. The gentleman who had charge of the case then sent her to me to "try what electricity would do for her." When I examined the patient I found the uterus had fallen back to a slight extent and on the left side there was a hard mass that felt not unlike a fibroid in the region of the broad ligament and extending behind the uterus. I gave the patient three treatments a week, using the clay electrode on the ab-

domen and a platinum tip in the vagina, covered with a large mass of moistened cotton so that the resistance from the vagina was very great. Within two months large pockets were made in the thickened mass that gave the sensation as if the vagina contained large cicatricial bands, but the closest inspection failed to reveal anything like scar tissue. The absorption of the inflammatory tissue had taken place more actively in the immediate neighborhood of the point of contact of the electrodes.

After this stage of the treatment had been reached the patient went to her home in another city and remained quiet for several months, and having felt much relieved returned again for treatment. The condition was much improved and the patient was put on the same treatment for two months more. At the end of this time the uterus was freely movable and the bastard bands had almost disappeared. Six months later the patient was in robust health for the first time since childhood and she has continued so, and I think she may be pronounced cured as the ovaries have returned to their normal size. The surgeon who sent the case to me was so much pleased with the result that he has since placed several patients under my care for this treatment and while we have not had any case improve so markedly as the one cited, from a great doubter he has become a convert to the usefulness of electricity.

Before closing this case I desire to call to the attention of the society a new form of water rheostat that I have devised, and which I believe is much more convenient than any of those now in use. The plates are like those in the Bailey rheostat only made larger, and instead of working up and down in the fluid with a ratchet the plates are immovable and the water let into the jar by a piece of tubing sliding into the faucet and syphoned out again. The faucet is slowly turned on so that a drop at a time is admitted and the strength of the current is absolutely evenly increased. No attention is given to the rheostat—it flows in slowly until the desired amount is reached or the patient complains of pain, then the faucet is turned off the current, the tubing is pulled out of the supply pipe and it syphones out the rheostat jar. If one has the time they are not difficult to construct and have proved a revelation to me in point of comfort to the patient and convenience to the operator.

G. H. Whitcomb, M.D., of Greenwich, N. Y., read a paper entitled

A RARE CASE OF TWIN-INTRA AND EXTRA-UTERINE PREGNANCY TREATED BY ELECTRICITY.

Gentlemen:—In calling your attention to the rare, and, taken as a whole, perhaps unique case here detailed, I feel the weakness of my position, in that my diagnosis was not verified or approved; not verified because fortunately an autopsy was not required; not approved, as a gynecological surgeon was not accessible, and financial considerations forbade sending for one at a distance.

The case was an anxious one, closely watched, and each fact carefully verified at the time. Over-statement has been studiously avoided. The case briefly stated, formed a part of the illustration of a paper read the following April, before the Union Medical Association of the counties of Berkshire, Mass., Bennington, Vt., and Rensselaer and Washington, N. Y., on Electro-Therapeutics in Gynecology.

It was not my purpose to give the case further publicity, until invited by your president to report it here, he having learned of the case through a friend of the patient. On the 10th of March, 1879, I was first called to see Mrs. W., age 36 years, the daughter of a physician and wife of a clergyman. She was a large, fine-looking woman, and under favorable circumstances would have maintained robust health. Her first and only child was born six years before, at which time she received a bilateral laceration of the cervix, resulting from a rigid os, and tedious labor. Her getting up was slow, owing to some inflammatory trouble from which she suffered for about five years, when she had a trachelorraphy at the Presbyterian Hospital, N. Y., after which she improved materially, until she became pregnant three months ago.

Shortly after conception she commenced to vomit severely, again became ill, and soon was troubled by severe, sharp colicy pains in the left inguinal region at frequent intervals.

Gestation had advanced to the twelfth week when suddenly a sharp cutting pain came in the region of the left cornus, and persisted with exacerbations, and attended by a sharp local peritonitis.

When I saw her a few hours later vomiting was constant, pain severe, pulse 120, small, hard and wiry, temperature 101.5. Her countenance was pinched and anxious and gave evidence of great distress. A satisfactory examination was impossible at this time, though unusual fullness could be detected in the left side, with the uterus pushed somewhat to the right.

With the use of hot fomentation, rectal enema, and anodynes for two days the inflammatory trouble subsided greatly. The uterus was now found anteverted and prolapsed, the cervix resting upon the perineum just above the sphincter ani, and the fundus lying forward against the bladder, causing vesical tenesmus. The uterus thus located gave an unusually favorable opportunity for examination and diagnosis. The organ was larger than would correspond to this period of gestation. This was due in part to the previously existing hyperplasia and the encroachment of a large mass on the left, which seemed to be continuous with and a part of the uterus. This body was as large as an orange and supplied with numerous pulsating vessels; not clear in its outlines; firm and elastic in its consistency; continuous with and not showing any line of demarcation from the uterus. The enlargement was more clearly outlined in front than behind, where a formless mass of exudation served to partially obscure it. It seemed in form much like a subperitoneal fibroid, well embedded in uterine parietes. Considering it globular, about two-thirds of its volume would lie outside the proper outline of the womb. The uterus, from its size, shape, and consistency, unquestionably contained a fœtus. I will not here discuss the diagnosis further than to say that the history, together with the conditions found, indicated as clearly as possible that we had to deal with either a tubo-uterine or interstitial pregnancy, or one in a rudimentary cornu, the first of which I believed to be the case. At all events, we had an ectopic gestation to treat, and one that had already produced a partial rupture, which might at any moment become complete. Prompt action was imperative. Laparotomy offered little, if the diagnosis were correct, since its danger would be little less than those already impending.

My personal knowledge of a case reported by Dr. T. G. Thomas as a successful treatment of abdominal pregnancy by electricity, and a favorable result in a probable case of my own, together with my experience with this agent in gynecological practice, determined its application here.

My portable galvanic battery being out of order, a faradic machine was used, with a ball electrode in the vagina, immediately underneath, and a small flat one directly over the mass on the abdomen, so as to confine the current closely to the desired locality. A mild and increasing current was passed for fifteen minutes daily during two weeks. The symptoms improved continuously, in all respects, though some pain persisted. The enlargement diminished noticeably, and seemingly from its outer surface, until the 25th, when it was not to exceed one-third its original size. The impression gained by constant watching was that it had gradually receded into the uterus. This occurred, however,

without an increase of pain. When the process commenced and ended, I am unable to say. It was not complete when the last treatment was given, from which time no examination was made, the patient being about the house, and moving into new quarters. The morning of the 26th a slight dark-brown discharge occurred, lasting for an hour, after which it was not seen until the evening of the 27th, when it was attended by a periodical pain. Abortion promptly following, the patient lost the fruits of a twin conception. The cord of the fœtus first delivered was broken; that of the second was attached to a placenta on the right front of the uterus near the fundus.

This was the only one within reach of the finger, which could not be carried to the supposed location of the other. The secundines were retained. The enlargement at the left of the fundus was now represented by a small, indistinct fullness only. Under antiseptic precautions the placenta on the right was removed nearly entire, and had the insertion of but one cord. That of the first born embryo was found in an extension or pocket in the location of the left tube, which admitted the curette forceps two inches further than they could be passed in any other direction. In order to reach this pocket, it was necessary to introduce the forceps with the concavity of the pelvic curve to the patient's left, when it was readily entered. With one hand locating the fundus it was apparent that the beak of the instrument passed to the left. The task of removing this placenta was both difficult and dangerous. With the aid of the patient's husband, who held the uterus tilted to the right, thus in some measure straightening the passage, it was picked away piece by piece until no more could be found. The curette was inadmissible here from danger of perforation. In this respect the forceps can be used with extractive force only, which greatly lessens the probability of this accident. The clearing out and irrigation of the womb occupied two full hours of anxious labor, which, fortunately, was amply rewarded by a prompt recovery. Pulse or temperature never exceeded normal: no pain, no hæmorrhage, discharge of débris, or foul odor occurred. In two weeks the patient left for a new home in the West. The day before her departure a most searching examination disclosed nothing pathological. The tubal enlargement had disappeared; involution was well advanced. In little more than a year the woman gave birth to a healthy child at term; and, so far as I can learn, after an uneventful gestation and labor. From the history, conditions, progress, and termination of the case it would appear that the diagnosis was verified, and treatment justified.

It is probable that the second ovum occupied such a position in the tube or rudimentary horn, as to jut slightly into or approach nearly, the uterine cavity; and that the localized electrical current secured its expulsion into its normal habitat, as in some cases before reported. In this instance the process was gradual, owing to the presence of a normal pregnancy. The absence of marked contraction pains during this transition is unusual, perhaps, though accounted for by the slow and gradual change, which was not completed until just before abortion. The integrity of the funis of the second embryo, enabled me to determine that the first was the one located above, and in the annex, and whose dislocation caused the loss of both, which lends interest to the case.

Dr. A. G. Henry, of Cortland, N. Y., read a paper entitled

A REPORT OF THREE CASES OF UTERINE TUMORS TREATED WITH GALVANISM.

The battery I used was a 32-cell one. As I could in neither of the cases introduce a sound into the uterus more than 1½ inch, I used a small olive-shaped tip for the intra-uterine electrode.

In each case I invariably used negative cauterizations. The strength of the current ranged from 20 to 75 milliampères—usually after the first few applications from 35 to 55. Duration of sittings five to ten minutes.

Case 1.—Mrs. B., of Trenton, N. J., aged 49, married, never had any children, just passed the menopause. Examination showed an intramural fibroid tumor, filling the pelvis and reaching to within 2 inches of the umbilicus. Its growth had extended over several years, and was now giving considerable trouble to bowels and bladder. No history of recent or previous pelvic or abdominal inflammation. Began treatment July 9, 1890, and continued until December 2, 1890, —fifteen treatments in all being given. There was steady improvement from the first, and at the last sitting, December 2, the growth was no larger than a hen's egg. She was symptomatically cured. Examination of this patient August 27, 1891, showed no recurrence of the growth.

Case 2.—Mrs. W., married, aged 44, menses regular. Last summer pelvic trouble induced her to seek medical aid. I first saw her August 5, 1890; she was confined to her bed with quite severe general pelvic inflammation. The inflammation had subsided September 10. A subperitoneal fibroid tumor, not larger than a goose-egg, situated more to the left, and projecting backward so much as to seriously annoy the patient whenever a movement of the bowels was attempted, was found. There was still much tenderness in the pelvic and lower abdominal regions. Treatments were begun September 13 and continued until October 17, thirteen treatments in all being given. Tumor was reduced one-half and she was approximately cured (symptomatically). She returned to her work, teaching, October 19. I examined her a few days ago—about August 20. Tumor rather smaller than when I ceased treatment last October. Menses still regular, feels perfectly well.

Case 3.—Mrs. F. B., aged 44, married, has never borne children. Eight or nine years ago she began to have some pelvic trouble, a feeling of fullness, leucorrhœa, etc., and some six years ago she noticed herself getting larger.

The enlargement continued to increase from year to year, until October, 1890, when a severe pelvic inflammation sent her to bed, where I first saw her, October 7.

There was pelvic and lower abdominal peritonitis. Abdomen much enlarged and tympanitic. There had been considerable flooding at each recurrence of the menses the past few months, and the last four weeks hæmorrhage had continued all the time. After the inflammation had somewhat subsided, October 22, an examination revealed a large fibroid tumor, completely filling the pelvis and reaching an inch above the umbilicus.

The growth was very hard and somewhat uneven. Pulse rapid, temperature from 100° to 102°, hæmorrhage about constant, patient much reduced. It was deemed best to try electricity without further delay. Intra-uterine treatments were given and begun October 31, 1890, and have been continued, with interruptions, to the present time. With the exception of a slight inflammatory attack last spring, progress toward recovery has been uninterrupted. The tumor now is not larger than a hen's-egg. She is doing her own housework, and says she feels better than for many years.

Dr. Massey: As this is the ending of our session for 1891, and Dr. Morton has been elected President of our next session, I invite him to the chair to close the meeting, as is the usual custom.

Dr. Morton: I will, in accordance with the usual form, declare this meeting closed, and announce that the next meeting will be the first week in October, 1892, to be held in New York.

The annual dues of the New York Academy of Medicine, have been increased to twenty dollars per year.

Philadelphia County Medical Society.

February 10, 1892.

Dr. L. K. Baldwin in the chair.

Dr. John B. Roberts read a paper entitled:

A CASE OF MALIGNANT DISEASE OF THE STOMACH IN WHICH GASTRO-ENTEROSTOMY WAS CONSIDERED.

I desire to briefly report the result of a case in which I was only deterred from making preparation for gastro-enterostomy by the debilitated condition of the patient, but in which the post-mortem findings demonstrated the inutility of such an operation. The delay which prevented me from subjecting the patient to the expense and anxiety of so serious an abdominal operation is so justified by the pathological conditions, that it has caused me to present the specimen for examination.

Upon being summoned to another State for surgical consultation, I found a man about 52 years of age suffering from great pain in the epigastrium. He was vomiting large amounts of fluid. The temperature was normal, but the muscular weakness was great, and sleeplessness pronounced. The abdomen was distended with gas, and there was a marked prominence in the neighborhood of the left hypogastrium. The patient had suffered for about four years with dyspeptic symptoms, during which time he had been under the care of many physicians. He had recently been treated by lavage, which relieved the pain temporarily, and he had suffered with such obstinate constipation as made the attending physician think that there was some obstruction in the alimentary canal. It was this, as well as the excessive pain, that induced him to call in surgical aid.

The character of the vomiting, the situation of the prominence in the left hypogastrium, and the general aspect of the case, made it very evident to me that it was one of dilatation of the stomach. I gave an opinion that it was very possible that there was malignant disease in the neighborhood of the pylorus, but it was impossible to determine the question because of the distended abdomen, and the diagnosis was hence left undecided. The administration of food by the mouth was stopped entirely, and enemata of peptonized milk combined with whisky were given every two hours night and day. Lavage was continued to empty the stomach and relieve pain. This line of treatment was continued for about three weeks. The patient's discomfort was relieved, the pain disappeared, the vomiting discontinued, and the consequent reduction of tympany rendered it possible to detect a hard mass below the liver, in the median line. The bowels in the meantime had become regular, by the occasional administration of cascara. This for two weeks, however, was not needed, because of spontaneous evacuation of the bowels, probably due to the enemata. Microscopic examination of the vomited matter showed me that blood was present in the ejecta, and I now made a diagnosis of malignant disease.

At the end of three weeks small amounts of nourishment were given by the stomach. We commenced with a drachm of peptonized milk with a few drops of whisky every two hours, and daily diminished the amount of food administered by the rectum. Gradually the amount of food taken into the stomach was increased until it reached 3 ozs. every two hours. The prolonged rest during the period above mentioned seemed to have been beneficial to the stomach, so that the small amounts of food given at frequent intervals were digested without pain; there was no vomiting, though the tympany became more or less prominent.

At the time he began to take food by the mouth I told the patient that he had malignant disease of the stomach, and that exploratory examination was proper with a view of determining whether an artificial opening could be made between the stomach and intestine, or the growth removed. This was deferred until the strength of the patient should be somewhat improved under gastric alimentation. The patient, however, continued to lose ground, and died about a month after my first visit. When the food given by the stomach reached three and a half ounces he began to have pain.

The autopsy showed, as the specimen makes clear, malignant disease infiltrating about one-fourth of the long diameter of the stomach, with several nodular masses at the pylorus. The pylorus, however, is sufficiently patulous to admit readily the introduction of a finger-tip. There was, therefore, no marked obstruction. The cardia is much thinned, while the middle portion of the stomach presents the normal thickness and characteristics. An adhesion has taken place between the stomach and the liver at the point where the growth is most marked.

Gastric dilatation had occurred secondarily to malignant disease of the pylorus. The only time at which it seems to me gastro-enterostomy would have been wise was previous to his coming under the care of Dr. H. A. Stout, who called upon me for assistance; and it is very doubtful if at any time the operation would have been beneficial. The pylorus, as shown at the autopsy, must have had an opening as large as would probably have been made had the operation in question been performed; and the infiltration of the wall of the stomach for one-third of its length would have made the area for an opening between the stomach and intestine limited. An opening would have had to be made between the thinned and dilated portion of the stomach at the cardiac extremity and the large area infiltrated with malignant growth toward the pyloric end. This, of course, could have been done, but prolongation of life would probably not have been gained.

The facts that the man was walking about and attending to business, and that the tumor presented no external manifestations make it extremely probable that an operation would not have been suggested previously to the time he came under the care of the physician who consulted me, except by an enthusiast.

I present the case partly because of the interesting character of the specimen, and partly as a contribution to a branch of abdominal surgery which is assuming increased importance.

The recent series of cases reported by Dr. N. Senn have been read by me with great interest; but the conclusion has almost been forced upon me that many of them were cases that scarcely justified operative procedure. Perhaps I am too conservative; but may it not be that he is too enthusiastic?

John B. Turner, M.D., read a paper entitled

SUCCESSFUL TREATMENT OF MEMBRANOUS CROUP WITHOUT EITHER TRACHEOTOMY OR INTUBATION.

The class of cases to which I refer are of laryngitis with fibrinous exudation and not complicated by diphtheria. My experience before February, 1891, covering a period of nine years, was to have treated medicinally eight cases, six of which died, showing a mortality of 75 per cent.

The results of tracheotomy in the practice of my medical friends having been so unpromising (all the patients dying), I did not at any time see fit to have the same tried in my practice. As to intubation, my experience is small—two cases, both dying. I condemn tracheotomy and intubation in true croup, as the same objections obtain in both, viz., that the accumulation of muco-pus in the lower part of the trachea and in the bronchi is lost sight of. Paralysis of the posterior crico-arytenoid muscles, preventing dilation of the glottis in inspiration, is a symptom no doubt relieved by tracheotomy and intubation, but the other paramount ele-

ments of danger in the case, as pneumonia, capillary bronchitis, accumulation of muco-pus, feeble expiratory efforts preventing expectoration, due to general debility and exhaustion, are *unremedied*.

The treatment I have used since February, 1891, is based upon the allaying of inflammation about the site of the membrane, effecting the separation of the membrane, lessening the formation of new membrane, effectually controlling laryngeal spasm and sustaining the strength. I use asafœtida by suppositories to allay spasm and to give needed intervals of quiet, restful sleep, and consider it a valuable and much overlooked remedy in membranous croup.

For the other conditions or symptoms I used ammonium chloride given in syrupy mixture without water, as the addition of water makes it unpalatable to children.

In Wood's Reference Handbook, in an article written by Dr. Nickles, of Cincinnati, "Wibmer found a very decided increase of the bronchial mucus after hourly doses of eight to fifteen grains of ammonium chloride, and other careful observers noticed the same effect. Experiments of Rossbach seem to show a different mode of action. Under the influence of the salt, the tracheal mucous membrane became anæmic and the secretion of mucus gradually ceased. The utility of ammonium chloride in catarrh of the air-passages may therefore depend upon a favorable modification of the vascularity of the mucous membrane, not merely upon a change of the quantity of the secretion." I am of the opinion that Rossbach's view is the more probable one regarding the action of ammonium chloride, and will better explain its beneficial action upon the catarrh accompanying croup.

I will now give the details of the treatment pursued in my last four cases, and advocate it as one simple, humane, and easily applied.

Case 1.—On February 16, 1891, I was called to see Sallie B., aged eleven months, who was suffering from a severe attack of membranous croup. The mother had lost two children on former occasions by the same disease, one in twenty-four and the other in thirty-six hours. Why croup has a predilection for certain families, I am at a loss to know.

I had the child taken to the Children's Hospital, and Dr. Samuel Ashhurst confirmed the diagnosis and recommended tracheotomy, which was refused by the mother. When the child was brought from the hospital to her home I gave the following treatment:

℞. Ammonii chloride, ʒj.
Syr. tolutan. fʒij. ♏.
Sig. Half a teaspoonful every two hours.

℞. Asafœtidæ pulv., gr. xvi.
Quininæ sulph., gr. iv.
Codeinæ, gr. ½.
Olei theobromæ gr. cxxx. ♏.
Sig. One every four hours.

The child did well (the attack lasting eleven days) and recovered. The patient received whisky and milk at regular intervals, and was kept in a well-ventilated room. By this treatment the appetite remained fairly good, and the strength was sustained. The same child had another attack on December 18, 1891, and by the same treatment was restored to health. I call this second attack Case 2.

Case 3.—John D., aged eighteen months; attacked on August 26th. Same treatment, and child recovered on the eighth day. The mother poulticed this boy on chest and over trachea, of which action I approved.

Case 4.—Harry J., aged two and a half years; attacked March 6th. Disease lasted one week. Recovered by means of same treatment. This case received larger doses of the ammonium chloride mixture because of his being older than the other children.

There was no atomization used on these cases.

Discussion.

Dr. Edwin Rosenthal: It seems to me extremely strange that such a disease as membranous croup should be so easily remedied by muriate of ammonium and asafœtida suppositories. In a series of some four hundred and twenty odd cases which I have followed and studied, in my own practice and in the practice of my friends, which were not treated by intubation or tracheotomy, and in which the diagnosis is undoubted, but three recovered. In sixty-four cases that I have intubated, fully one-half died. Many of these cases had been previously treated by muriate of ammonium, and also by chloral, which I consider a better antispasmodic than asafœtida. Chloride of ammonia has been long used in this disease. It was recommended by Dr. Condie—one of our earliest members—for membranous laryngitis, and in *Watson's Practice of Physic*, edited by Condie, was described the method of its action, which, if I remember correctly, was to defibrinate the blood, prevent the pseudo-membrane from forming, and facilitate the absorption of tissues already formed. If Dr. Turner considers membranous croup one disease and diphtheria of the larynx another disease, he falls into error regarding treatment. If he means to say pneumonia, capillary bronchitis, and œdema of the lungs, which are so often complications of croup, succumb so easily to the treatment by muriate of ammonia, or that they will not occur when cases are treated in this way, I think places him also in error. I have seen so many fatal cases of croup that I cannot believe that true membranous laryngitis can be successfully treated in the manner he describes. I have practiced intubation over one hundred times, and have had fairly good success. But I have not relied upon remedial measures such as have been mentioned.

Dr. M. O'Hara: The easy cure of cases supposed to need tracheotomy can bear a very different explanation. It may well be in view of the many cases of recovery after the apparent judicial condemnation of the doctor, not depending sufficiently upon the powers of Nature.

Some years ago I reported a case and published it in the *Proceedings* of the County Medical Society, which can be referred to for details (vol. i, p. 21), entitled "Remarks on a Case in which the Necessity for Tracheotomy was Averted by the Systematic Action of Intense Cold Exciting Forcible Inspiration." This was a case in which a most eminent throat specialist considered the time gone by for success by tracheotomy, in a case of nasal diphtheria after measles, and considered it would be closed by death in eight hours, and yet recovered under use of ice, and he frankly told the mother afterward that he probably would have finished the case with the knife. Here there was an error of judgment; though all thought there was membranous deposit, there could not have been any. I have known similar cases, and sending for a consultant surgeon in several cases, waiting brought the patient around. The late Dr. Henry A. Smith related at one of our meetings many cases of this kind in a discussion on the topic, and I hope those of us present familiar with the point will relate such cases for instruction. I rise to have this point specially ventilated.

Dr. H. R. Wharton: I agree with Dr. Turner that many cases of croup get well with the simple medicinal treatment, but I disagree with him in regard to the large number of unsuccessful results from tracheotomy and intubation. My experience with tracheotomy is that even in the most urgent cases many recover. Last year, at the Children's Hospital, 43 per cent. of the tracheotomies recovered. I have used chloride of ammonia to some extent in the treatment of croup, but in the last few years I have put more confidence in the carbonate of ammonia, and follow the plan of treatment suggested by Mr. Parker, an English surgeon. I combine the carbonate of ammonia with syrup of senega. My routine treatment in ordinary cases of croup, in which the symptoms are not sufficiently urgent to call for intubation or tracheotomy, is to place the patient on carbonate of ammonia with senega, and to see that he is thoroughly stimulated. At the same time I believe that local treatment by inhalation of some medicated vapor is of service. I have recently employed the ordinary steam atomizer, in which I use an alkaline solution, such as carbonate of soda and glycerine. The atomized solution is used as frequently as every half-hour or hour, according to the urgency of the symptoms. This solution is also useful after intubation or tracheotomy. I believe that many cases of croup do get well if carefully treated and do not come to the point where operation is necessary. I think that the use of strychnine and digitalis in the early stages of the disease often prevents trouble later on from cardiac failure. While at times these very urgent cases will get better without operation, yet in my experience this is the exception. Within a year and a half, death has occurred in five cases of croup in which I was summoned to do intubation or tracheotomy, before I could reach the patient. I think it unwise to say that in these urgent cases operation should be postponed, for many cases of croup die suddenly.

Dr. B. Trautman: We should not lose sight of the distinc-

tion between catarrhal croup and membranous croup. Most cases of catarrhal croup will get well without much treatment. By keeping the patient warm and giving an emetic, the cure will be effected. In membranous croup the tendency is to postpone operation too long, till cyanosis sets in, and then the patient generally succumbs. The course of treatment which I pursue in membranous croup is the administration in one mixture of bichloride of mercury, tincture of iron, and chlorate of potassium. As an emetic I give sulphate of copper, 1 gr. for each year of the child's age. That will often bring away the whole membrane. If it does not bring it away, tracheotomy or intubation should be done at once.

Dr. Nutt, of Williamsport: This subject has interested me very much. For the last eight or ten years I have done intubation frequently—I think in seventeen consecutive cases—and out of that number there have been only four deaths. I am therefore a strong believer in intubation, and I had hoped that there would have been a more general discussion on this point. I fully agree as to the necessity for intubating early. When I first began the use of this measure, I usually put it off until the last moment, as a last resort. When the lungs are all filled up and the child cyanotic, I do not believe anything will save the child. I cannot see that intubation has any bad effect, and if used early in the disease, we can reduce the rate of mortality very greatly.

Dr. John B. Roberts: It seems to me that this is the old story, that the man who never operates is sometimes wrong, and the man who always operates is sometimes wrong. The discussion seems to be a little uncertain, because some speakers use the word croup and others the word diphtheria. Whether or not they mean the same thing, I do not know. If I am called in surgical consultation to a child with difficult respiration due to some inflammatory disease of the throat, it makes little difference to me whether some pathologists call it croup and some diphtheria. I call them all diphtheria, and advise the attending physician to report the case as diphtheria to the Board of Health. Eight or ten years ago I made up my mind that in all cases of diphtheria where there was dangerous difficulty in respiration, my duty was to advise tracheotomy, and to do it. That was before the time of intubation. I did tracheotomy over and over again, and, though I never saved a patient, the relief to the patient was so great that I never regretted the operation. I believed that in all such cases, where there was dangerous cyanosis, my duty was to open the trachea. Since intubation has been revived by Dr. O'Dwyer, I have adopted that as the primary operation, and reserve tracheotomy for a later procedure. To see a child suffocating to death and withhold your hand, is almost as bad as saying that you will not use the stomach-pump, even though you know that the person has poison in the stomach. Of course, I do not advocate intubation or tracheotomy in cases where the child is dying from the diphtheritic poison, and not from obstruction in the larynx. A few weeks ago I was called in consultation to see a child. The case had previously been seen in consultation by another gentleman, who said that nothing could be done. I was then called, and introduced an intubation tube, and in a few minutes the child was breathing comfortably. The tube was vomited out, however, but the relief which he had experienced was so great that the child permitted me to apply the tube again without struggling. He subsequently wore the tube about two days, and is now well. We must select our cases for tracheotomy and intubation, just as we select our cases for laparotomy or any other operation.

Dr. John C. DaCosta: It is not strange that such brilliant surgeons as the last speaker advocate tracheotomy. But what is the mortality? Some ten or more years ago, I collected and analyzed twenty-four or twenty-five hundred cases of tracheotomy, and the result showed that only about 24 per cent. recovered. But one reference has been made to-night to the old-fashioned method of using emetics. Nothing will dislodge the membrane quicker in croup than an emetic. You may use ipecac or sulphate of copper, but one of the best is the yellow sulphate of mercury, which latter, I think, has more than a simple mechanical effect. In true croup there is nothing equal to the internal administration of mercury, which may be given in the form of the mild chloride, or of the bichloride or the old-fashioned blue pill. Another point is the enforcement of sustaining treatment. If quinine is used in suppositories, it should be in the form of the bimuriate or bisulphate, or the sulphate mixed with tartaric acid, so as to insure its being dissolved. Anodynes may be needed to quiet spasm.

Dr. John B. Deaver: As has already been said, each case has to be treated on its own merits. There is much to be accomplished both by tracheotomy and by intubation in cases of true croup. My experience, however, has been that in many cases the introduction of an intubation tube occludes the larynx still further, and increases the child's suffering; in those cases I do tracheotomy. I think that these operations are better applicable to cases of croup proper, and I am not in favor of doing them where there is much depression, as occurs in true diphtheria. I cannot agree that all cases of diphtheria die an easy death, even when the tube is employed. I have seen them strangle as much after intubation or tracheotomy as before. The operation usually does give relief, but the inflammatory process may extend further down and the symptoms of obstruction may be renewed. I believe strongly in the use of mercury in these cases in order to get its constitutional effect. I use calomel and push it as far as I can, it being difficult to salivate children. The bichloride acts quicker, but it is more apt to irritate the gastro-intestinal tract. I believe that there is a difference between croup and diphtheria. I do not believe that they are one and the same disease. The one is local and the other is constitutional. This subject is a very interesting one, but I do not see how we are to instil into the minds of any the cases which should be intubated and those in which tracheotomy should be done. This question must be judged by the experience of the operator.

Dr. W. S. Stewart: The doctor did not make a distinction between the true membranous croup and what is known as spasmodic. The latter can be relieved by emetics and counter-irritants, but in true membranous croup we need something more than emetics. I agree in regard to the use of the remedies to which reference has been made. I believe in calomel, or mercury, in other forms. I have been to many operations for tracheotomy, and have seen some cases when the operation was performed where I believe I should have still hoped for recovery without an operation. It is hardly fair to record such cases of recovery as a result of the tracheotomy. On one occasion I went three times to one case to assist in performing tracheotomy, and every time we were refused the privilege. Death was confidently prophesied by the attending physician, but the child recovered.

On another occasion I was attending a child where I feared death was going to result, and I advised the family to call in consultation a gentleman who intubated. During the interval of sending for the doctor and his arrival, the child improved; still, I asked the doctor if it was a good case. He said he regarded it as a good case for intubation. I told him to put in the tube, and turned the case over to him. On the second day the child was dead. I do not say that we should never operate or never use a tube, but I do say that those who are enthusiastic in regard to operations are often careless in their zeal to press the proper treatment. They do not pursue the medical treatment as perseveringly as they should.

Muriate of ammonia by itself is very hard on the stomachs of children, but a good combination is chloride of ammonium with chlorate of potassium and syrup of senega. I often combine with this, syrup of squills, ipecac, and tolu: I also administer quinine by the mouth in the form of the tannate. This method often has a very good effect in arresting the development of ordinary membranous croup, when given in large and frequent doses, and the expectorant has the effect of absorbing the membrane already formed.

Dr. G. Betton Massey: There is a therapeutic item to which I have often wanted to direct the attention of general practitioners. During the ten years that I spent in general practice, I invariably prescribed insufflation of powdered sulphite of sodium in those cases of diphtheritic sore-throat with general systemic disturbance that seemed to be the first stage of diphtheria. In all these cases the membrane disappeared in from twelve to twenty-four hours, and it was a curious fact that in these ten years I did not see a bad case of diphtheria. Whether these membranous sore-throats were of that nature, and were arrested, I am of course uncertain. The powder was insufflated through a paper roll every half-hour, the paper being burnt after each insufflation to prevent the wrong end being subsequently used and infecting the nurse.

Dr. Daniel Longaker: The theory which best fits the facts in these cases is that most of these cases are diphtheria, and that we have either a primary laryngeal diphtheria or a secondary laryngeal diphtheria. It often happens that a child is taken with membranous laryngitis and two or three days later the membrane will appear in the fauces. Diphtheria is primarily a local disease, with, later, general manifestations. It seems to me that the local disease in the fauces is the point of invasion, and a poison is developed and absorbed with such serious effects. I do not think that any

one method of treatment of croup can be maintained. Every case must be treated on its own merits. I have found the peroxide of hydrogen very efficient when used as a swab or as an atomized solution. I have used it in a number of cases in the past three or four months with satisfactory results. I do not advocate exclusive medicinal treatment or exclusive treatment by intubation, or exclusive treatment by tracheotomy. Each method has its own field of application.

Dr. Rosenthal: I have used the peroxide of hydrogen for over a year. Of the kinds obtained in the markets—manufactured by Charles Marchand, Rosengarten & Sons, and Merck—I find that of Merck the best. At first I used it diluted, but gradually increased my strength of solution until now I use it absolutely pure. I apply it in membranous laryngitis in the form of a spray by means of an atomizer quite copiously, and where the membranes are visible the applications are made direct with probangs of cotton; my applications are made hourly. My remedial treatment is essentially antiseptic, mercury being used fearlessly. I also use stimulation freely—as for instance, in a child of four years I gave as much as a gill of brandy in twenty-four hours. I firmly believe that my success in the treatment of diphtheria, whether it be of the larynx or fauces or nose, is based on this antiseptic treatment; and in peroxide of hydrogen I think we have a most potent means of applying it. I attribute my success to it, for I believe, while diphtheria is a constitutional disease, the presence of the membrane hastens the absorption of poisons and produces septicæmia and toxæmia; and in the peroxide of hydrogen we have a cleansing agent which quickly modifies, removes, or alters these conditions of things. In the last epidemic I have treated all forms, except of the larynx, with but one death, and that one was in a rhachitic child. There is one point that I wish to place myself on record as against, and that is, the indiscriminate use of emetics in membranous laryngitis; I believe it is wrong in theory, wrong in practice, death is hastened by their use, and I have yet to see one case benefited or cured by their use. I believe that diphtheria and croup are clinically the same, whether the disease begins primarily in the larynx and extends upward, or in the pharynx and progresses downward. The youngest case intubated by me was four months and twenty-seven days, the oldest five years and six months; in all my cases peroxide of hydrogen was freely used.

Dr. DaCosta: I understood that the discussion was on croup, and not on diphtheria. The mode of onset, the symptoms, and the results of the two diseases are entirely different, Take a few points of differential diagnosis:

In croup the attack is more sudden, and the patient recovers more rapidly. In diphtheria the patient does not recover fully for weeks, and the attack is apt to be followed by paralysis, which we do not find in croup.

Diphtheria is contagious; croup is not. Croup is found in isolated cases: diphtheria attacks whole families.

But if we are going to talk about diphtheria, I would indorse peroxide of hydrogen. I know nothing that will clear off the membrane quicker than it will.

Dr. DeForest Willard: While there are such wide differences of opinion in regard to the pathology of these diseases, it is not strange that there should be these marked differences as to methods of treatment. Some of the speakers, perhaps, refer to one disease, while others refer to another. We all recognize that mild cases get well without much treatment, but there is another grade of cases which will die, whether treated medicinally, or by intubation, or by tracheotomy. Reliable inferences cannot be drawn from a small number of cases, and even in larger numbers we all know that we may have a hundred successive cases of recovery in a certain disease, while all of the next ten may die. This is especially true in membranous croup and diphtheria. I am confident that I have saved a good many lives by tracheotomy, but I have also lost many. Yet the comfort secured to the patient has amply repaid me, even though death has subsequently taken place.

Dr. Turner: I was led to write this paper from the fact that I knew that certain cases of spasmodic laryngitis were intubated and reported as cases of recovery from croup. The treatment which I have mentioned will decide the question whether the case is one of spasmodic croup or not. I also employ calomel, and use quinine in the form of the bisulphate in suppositories. It takes the membrane three or four days to be separated. It cannot always be removed by an emetic, but if you get rid of the spasm you give a great deal of relief. Asafætida has not been used before in croup. I do not say that intubation and tracheotomy are of no use, but where the membrane is below the trachea and in the bronchial tubes, the case cannot be relieved by these measures. The treatment which I advocate gives to the child sleep, rest, and nourishment. Take a healthy child and treat it with emetics and the other things which have been mentioned, rousing it up every hour to spray its throat, and it would take a good constitution to stand that. Croup is not a very common disease. And in my paper I have referred not to diphtheritic croup, but to membranous croup.

In regard to the employment of calomel, I will state that I employ a purgative dose in the beginning of treatment, if constipation exists, to arouse secretions, and do not use it for its supposed action to dissolve the membrane.

J. M. Baldy, M.D., Professor of Gynecology in the Philadelphia Polyclinic; surgeon to Gynecean Hospital; Gynecologist to St. Agnes Hospital, read a paper entitled

CHRONIC ENDOMETRITIS.

Of late years it has become the habit of gynecologists to con sider almost all endometrial disease as symptomatic, and not an independent lesion. It is certainly true that many pelvic diseases are accompanied by an unhealthy condition of the endometrium; especially in pelvic inflammatory disorders the lining membrane of the uterus is so frequently affected as to have given rise to the supposition that it is either caused by the pelvic disease, or rarely occurs independent of it. In fact, such assertions are frequently made in print and on the floors of our societies. The temptation is strong to accept this theory, which appears at first blush to be so plausible, but which is nevertheless most fallacious. My daily experience is teaching me that endometritis as an independent disease is quite a common disorder, and is at the bottom of many of the discomforts suffered by women. The causes giving rise to this disease are much the same as those which originate vaginitis, and particularly salpingitis—specific infection and post-puerperal sepsis being the most prolific, and giving rise to the bulk of the cases. Oftentimes the beginning of the trouble can easily be traced to a child-birth or to an abortion. The woman has had a slow get up, and will give the history of some fever, or she has regained her usual health very slowly, and possibly not at all; she will have complained of a vaginal discharge since her confinement, when previously she had been free from this annoyance. The history may be that of an attack of specific infection. Sometimes the history in such a case is clear—a sudden appearance of a yellowish vaginal discharge with swelling of the labia and burning micturition. At other times the evidence of specific infection is not entirely satisfactory, but it is quite notorious that women often become contaminated without giving it any particular attention, or the discomfort has been so slight as to be soon forgotten. In any event, if the disease be neglected and spreads to the cavity of the uterus, it soon spends its force and settles down to a chronic condition. It may or may not extend into the Fallopian tubes and cause a salpingitis and peritonitis. Should it do so, as is often the case, the removal of the appendages will not necessarily bring about a cure of the patient. In fact, this is the secret of the failure of laparotomy in many of the cases which are going from one clinic to another for relief. Even if the disease is complicated by pelvic disorders of an inflammatory nature, especially if the two arise from the same cause, it is well to first turn our attention to the endometritis, in which case a laparotomy may at times be avoided. In other words, certain cases embracing the two diseases, the symptoms from the endometritis may overshadow those from the salpingitis; this is especially true of many instances in which the intra-peritoneal damage has not been very serious. In these cases where the peritoneal inflammation has subsided, and only its products remain, the treatment of the endometrial inflammation, which, under these circumstances, is usually chronic, can be carried out with impunity if ordinary care be taken. Of

course, in the event of there being an acute or even a subacute pelvic inflammatory condition present, great care must be taken not to interfere with the uterus in any way, else an already bad condition of affairs may be made much worse, and even serious. In many patients, in whom there exists post-puerperal septic endometritis or specific endometritis, the disease has stopped short of the tubes, and has not involved either them or the peritoneum. These cases are quite common, and are daily overlooked. The women wander from one doctor's office to another, and finally, when their money is all gone, into the public clinics, seeking relief in vain. It is often a matter of surprise to me that many of them have never even had an examination made, but have been treated for months and years with drugs, or have been advised to use an injection of hot water. The hot water injections as usually given are worse than useless. Just sufficient water at a moderate temperature is used to cause a congestion of the uterus and pelvis, which congestion is not relieved by the secondary effect of the hot water, *viz.*: the contraction and consequent driving away of the blood from the parts. These women suffer from a continual uterine discharge more or less profuse; there is, perchance, a feeling of weight and heaviness in the pelvis, accompanied by backache; sometimes they feel weak and worn-out. The menstrual function is disordered, being generally irregular and profuse; pain may or may not attend this function. These symptoms exist either alone or in various combinations, the only constant and reliable one being the uterine discharge. A local examination discloses an enlarged and heavy uterus, from the cervical canal of which an unhealthy thickish discharge is oozing. Oftentimes the cervix is eroded, and the mucous membrane of the everted lips, if the lips be everted, bleeds on being touched with a piece of cotton or an instrument. This hæmorrhagic condition is more apt to be present when the disease is still acute or subacute; but, nevertheless, it is at times seen in the chronic cases. In some instances the uterine body is comparatively normal to the touch so far as its consistency is concerned; again, it may be either too soft, or, what is more common, extremely hard, and even almost fibrous in character. These changes indicate that the disease is not altogether confined to the endometrium, but has invaded the structures comprising the uterine wall. It is no uncommon thing to see an endometritis and a metritis coexisting; in fact, in chronic cases it is rather the rule than the exception. The disease is almost always primarily an endometritis, and treatment which will cure this affection will be followed by a cure of the metritis almost as a matter of course. So much is this the rule that I have gotten to look on these two diseases as very much one and the same.

Where this condition of affairs exists—a large and abnormally heavy uterus—there is very apt to be a retro-displacement of the womb sooner or later. Whether or not all displacements which give rise to trouble are originally caused by uterine inflammations, it is a curious fact that it is a very rare thing to find a troublesome retro-displacement without either uterine or pelvic inflammatory disease complicating it.

For the treatment of uncomplicated endometritis and metritis there are a variety of remedies, some of them quite effective, while many of them are useless, and are applied in a haphazard way. My own preference is to adopt the shortest and surest course of procedure. The woman is put under ether, the cervix is dilated, and the uterus thoroughly curetted; the uterine cavity is then washed out, and an application of Churchhill's iodine made to its surface. If there is pretty free bleeding in consequence of these manipulations, the uterus is packed full of iodoform gauze, which is removed in the course of a day or two, as circumstances demand. Ergot may or may not be given by the mouth, the indications for its use being hæmorrhage or an enlarged, heavy uterus. Usually, I give ½ drachm of the fluid extract three times a day for a short period, gradually reducing the quantity until it is dispensed with altogether in about a week.

As to the steps of the operation: The patient is placed in the dorsal position, the dilatation is made with the Goodell rapid dilators, after careful antiseptic precautions. I dilate usually only sufficient to introduce and manipulate my instruments easily—from ¾ of an inch to 1 inch. Great care is taken to make the curettement a thorough one. All débris can be washed away, and the cavity cleansed by the use of the rectal nozzle of a Davidson syringe. The application of iodine follows immediately, it being applied with a long-nozzled uterine syringe. The patient is now returned to bed, and nothing more is done for a week or two, excepting to give absolute rest, hot water injections, and keep the bowels soluble, together with the ergot as indicated. I have not found the occasion to place a hard rubber drain in the uterus, as Wylie does, nor to pack it with iodoform gauze for a prolonged period, as Polk proposes. I find, if my dilatation has been properly made, that the cervical canal remains sufficiently patulous for the necessary drainage. The uterus will resent in one way or another the presence of a foreign body, and these procedures can only result in just so much more irritation and consequent discharge.

Some patients are cured altogether by this treatment; but, for the most part, in order to secure a thoroughly satisfactory result, treatment must be kept up for some little time after the woman is allowed to get out of bed. It is my habit in these cases, to make an intra-uterine application of iodine about twice a week for a few weeks, then once a week, and finally to withdraw the treatment altogether. The hot water injection should be kept up twice a day throughout the whole course of treatment. It is not uncommon, where the endometrium has undergone a fungoid change, for the disease to return, and the whole treatment has thus to be gone through with a second time.

Many patients will not submit to this treatment, in which event it becomes necessary to resort to other methods of management. A prolonged course of intra-uterine treatment will, in many cases, eventually bring about the same result. I do not maintain that iodine is the only remedy to be used for this purpose, but I have come to use it routinely for the reason that I have found no other drug which would give better results. It is not advisable always to use it in full strength, in which case it may with advantage be diluted with glycerine in the required proportions. Ichthyol and all similar substitutes have only proven disappointing.

So much for the uncomplicated cases of endometritis. Where the disease is accompanied by a pelvic inflammatory condition the first question to settle is whether or not an abdominal section is to be performed for the removal of the appendages. If they are not sufficiently affected to call for the operation, and if the uterine symptoms predominate, and are very annoying, I have no hesitation in treating the uterine cavity. A long-nozzled uterine syringe may with safety be passed into the uterus, even in the presence of considerable pelvic disease, and a local application thus made. In these cases the strength of the material injected should be regulated by the amount of inflammation, as a strongly irritating fluid will be much more likely to cause trouble than the mere passage of the instrument itself. When the pelvic disease has been an old one and quiescent I have not hesitated in gently dilating the cervix and curetting the cavity of the uterus, nor have I ever had any trouble follow such a procedure. In this class of patients there is an opportunity for the nicest kind of judgment, and if one be skilful and careful in selecting the proper cases the treatment may be followed by the greatest benefit. I am perfectly well aware that this is contrary to the teachings of many gynecologists of the present day, but my own experience in these matters has opened my eyes to the fallacy of such deas. If the gentlemen opposing the practice of intra-uter ne treatment would try it on some of their cases who cont nue to have enlarged uteri and a vaginal discharge after the removal of the appendages they would soon become convinced of its practical value, even in these cases.

The treatment of endometritis by electricity I have not touched upon, not that I do not approve of it, but because Dr. Massey follows me with a paper on that subject. It is especially valuable in those cases which refuse the above line of treatment.

(*To be concluded.*)

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SATURDAY, MARCH 5, 1892.

THE INDICATIONS.

In recent issues we have published announcements from several section officers of The American Medical Association, which of themselves go to show the coming meeting to be full of scientific interest.

The American Lancet, published in Detroit, says:

The following committees will attend to the arrangements for the meeting of the American Medical Association in Detroit in June:

Executive.—H. O. Walker, Chairman; F. W. Mann, Secretary; T. A. McGraw, J. H. Carstens, Leartus Connor, Donald Maclean, C. G. Jennings, David Inglis, E. L. Shurly, H. W. Longyear, H. F. Lyster.

Registration.—David Inglis, Chairman; C. W. Hitchcock, Angus McLean, S. G. Minor, Don M. Campbell.

Finance.—E. L. Shurly, Chairman; J. B. Book, S. P. Duffield, E. A. Chapoton, J. E. Clark, W. P. Manton, Charles Douglas.

Entertainment.—Donald Maclean, Chairman; H. A. Cleland, T. A. McGraw, G. A. Frothingham, Eugene Smith, C. J. Lundy.

Transportation, Hotels, etc.—H. F. Lyster, Chairman; W. G. Henry, A. E. Carrier, O. S. Armstrong, W. F. Metcalf.

Reception.—Leartus Connor, Chairman, Detroit; G. A. Frothingham, Detroit; C. G. Jennings, Detroit; E. W. Jenks, Detroit; Hal C. Wyman, Detroit; Carl Crumme, Detroit; G. W. Stoner, Detroit; A. W. Alvord, Battle Creek; J. Avery, Greenville; H. B. Baker, Lansing; E. O. Bennett, Wayne; Lyman Bliss, Saginaw; E. H. Pomeroy, Calumet; G. E. Ranney, Lansing; Chas. Sheppard, Grand Rapids; J. M. Snook, Kalamazoo; C. B. Stockwell, Port Huron; Eugene Boise, Grand Rapids; Fleming Carrow, Ann Arbor; E. P. Christian, Wyandotte; W. H. Decamp, Grand Rapids; Geo. Dock, Ann Arbor; S. S. French, Battle Creek; J. B. Griswold, Grand Rapids; F. J. Groner, Grand Rapids; W. J. Herdman, Ann Arbor; G. K. Johnson, Grand Rapids; T. J. Langlois, Wyandotte; H. D. Thompson, Albion; A. A. Thompson, Flint; V. C. Vaughan, Ann Arbor; G. V. Voorhees, Coldwater; R. LeBaron, Pontiac; C. H. Lewis, Jackson; Kate Lindsay, Battle Creek; H. McColl, Lapeer; W. C. McHench, Brighton; H. R. Mills, Port Huron; J. D. Munson, Traverse City; R. N. Murray, Flint; A. W. Nichols, Greenville; J. D. North, Jackson; P. D. Patterson, Charlotte; D. C. Wade, Holly; D. E. Welsh, Grand Rapids; H. Williams, Saginaw; D. H. Wood, Quincy.

Place of Meeting of Sections.—J. H. Carstens, Chairman; J. J. Mulheron, J. E. Emerson.

Information.—H. W. Longyear, Chairman; W. B. Sprague, C. P. Frank.

Exhibits.—H. O. Walker, Chairman; F. W. Mann, C. G. Jennings.

Printing.—Geo. Duffield, Chairman; C. H. Leonard, W. R. Chittick, L. E. Maire.

Railroad Depot.—B. P. Brodie, Chairman; D. L. Parker, F. W. Robbins.

One thing in the above announcement is brimful of suggestiveness, viz.: The reception committee is not only numerically large, but geographically takes in many prominent members of the profession from different parts of the State of Michigan.

The idea is a grand one, of having the members of the American Medical Association made the guests of the profession of a great State like that of Michigan. The very thought of such an occasion should and will send a thrill through every other State, that will call together at least five to six thousand delegates.

The section officers are live working men and preparing their feasts of lore, while the profession of one of the largest States in the Union is engaged in the preparation of social enjoyments that we are sure will rival royalty in munificence and be dispensed with a whole-hearted, whole-handed hospitality, known only to Americans.

Local societies are now active and many of them will very soon elect delegates to the ensuing meeting. Let every one who can do so, begin to make arrangements for attendance on this meeting. Detroit is a beautiful city. Hotel accommodations are ample, and the hospitable string attached to the door latchets of the homes of the people of Michigan are all made to work from the outside.

We have the honor of a good large acquaintance in Michigan, and know enough to know that all we have said is true, and that the doctor who doesn't go to the next meeting of the American Medical Association will miss an occasion for which he will have just cause to lament during the remainder of his years.

COTTAGE-HOSPITAL OR ASYLUM CURE FOR EPILEPTICS.

At Wilhelmsro, in Sweden, there has recently been established the nucleus of a refuge for epileptic children. At present there are twenty inmates, most of them rescued from depths of neglect and privation, if not of cruelty. Some of the children, when admitted, were little better than skeletons and brutalized by the treatment they had undergone. The methods of caring for these children, about one-half of whom are idiotic or deficient, is that of the French homes at Laforce. As soon as practicable the idiotic members of the family will be cared for in a building apart from the less unfortunate class. The training of each class will be carried out on lines appropriate to each. As the work and means progress, there will gradually be here built up an epileptic farm-colony, the like of which exists at thirteen or fourteen different localities in Europe. At Baldwinsville, Mass., exists the only institution for epileptic children in this country. This is composed of a series of cottage homes, accommodating about eighty

patients, who are mostly from the families of the poor, and who must be maintained and educated at the expense of the State, aided by private charity. It is stated in the *Medical News* that at Gallipolis, O., a second epileptic retreat has been inaugurated; but whether for children or adults, for charity or for pay-patients, the scope and details of the undertaking are not known. Besides these two, we believe there is no institution of relief or training distinctively formed for epileptic unfortunates anywhere in English-speaking countries. Great Britain is said to have none, and no systematic movements are known to have been made in that direction. Two hospitals exist in London for epileptics, paralytics, and other neuropathics. There are none for epileptics as a separate class.

Efforts have been made in New York and Massachusetts to secure legislation which would differentiate unfortunates of this class from lunatics on the one hand, and from county paupers on the other hand. The commingling of epileptics with the insane is beneficial to neither class. The insane are injured by the excitement of viewing one of their companions in the throes of epileptic seizure; and the victims of the latter disorder during the period of release will often account themselves doubly aggrieved — first, by nature in their distressful malady, and secondly, by society in shutting them up as companions of the demented. Furthermore, the aimless and indolent life of the asylum is detrimental to many young epileptics, occupation being to them prophylactic and beneficial. It has been repeatedly demonstrated that an enforced idleness, in the case of an epileptic, formerly suitably employed, has appeared to aggravate his malady. We have all heard of the "Sunday epileptic," and the explanation has been accepted as plausible that on that day, the patient being unoccupied, the "discharge" of corticle nerve-energy vented itself aimlessly in a fit, rather than in an orderly manner by means of work, as on week-days. The theoretical averment has been made that work will oftentimes (not always) operate as a "safety-valve" when the cerebral instability is functional rather than "essential," or due to gross lesions. Apart from any theoretical or debatable proposition, very tangible proof comes to us from Germany respecting the benefits of a systematic care, training, and employment of these unfortunates.

We refer especially to the farm-colony of PASTOR VON BODELSCHWINGH, of Bielefeld, near Hanover, and other like undertakings that have followed in its wake. There are at least nine others in Germany, and one each in Holland, France and Switzerland; and one now commencing in a tentative way in Sweden. The institution at Bielefeld is the marvel of one man's work—the joint product of enthusiasm and true philanthropy. It was begun in a small way twenty-five years ago; the Lutheran pastor above named was led to see the needs of this apparently neglected class as no one before him had been impressed by them, and he set before himself the truly noble task of building up a refuge for the afflicted of his parish, where medical care and industrial training could go hand in hand. The beginning was made with less than a dozen patients. At the present time there are upward of a thousand epileptic colonists cared for in various departments. There is a farm of 300 to 400 acres, with fifty to sixty cottages and other buildings, situated amid gardens, meadows and woodland. It has much the appearance and many of the shops of a tidy country village. There are schools and stores, a printing and binding establishment, a dairy, brickyard, saddlery and foundry. The epileptic colonists carry on the various trades necessary for the building and fitting of houses; some thirty different branches of work for the males alone. The female patients have the household work, horticulture, spinning, weaving and tailoring as their principal occupations. Much of the work, both of the female and male divisions of the colony, is done well and contributes to the support and growth of the institution. Some of the inmates are of course able to produce more than others, but they all become here more productive than they possibly could be at their homes. In their homes, rather, it might be expected that they would be a drag and a drain upon the other members of their families. A large proportion of these latter are in poverty and absorbed in their individual struggles for existence. Even in the homes of those who are well-to do, there must be wanting some of the training advantages which are prominent in a relief colony like that of PASTOR VON BODELSCHWINGH. Only the experience of years could teach in matters of internal administration, such as economy and thoroughness in the employment of nurses and safeguards. It has been found, for example, that one hundred cases may with safety be grouped in one dormitory, and that groups of this size can be watched both night and day. There is a sick-ward, or infirmary, near at hand, into which any urgent cases can be removed without delay. The beds in the dormitories are only a foot in height, so made for the purpose of minimizing the effects of falls during nocturnal seizures if the night-watch fails to reach the patient's bedside in good season; and so on in regard to many details.

It is not to be expected that every new colony can begin with all the aggregated advantages that now cluster around the matured system at Bielefeld. The public, in this country at least, requires to be educated up to the necessity and humaneness of a large special provision to be made for epileptics. And then

men strong in executive ability must be found or developed for leadership in colony-formation of the kind above indicated. We verily believe that, when the time fully arrives, there will be both money and men at command sufficient for an enlightened care and tutelage of this now neglected class. One way that is open to the education of the people in this important matter, is the yearly introduction of bills in the various State Legislatures for the especial benefit of the epileptic. These bills will probably not pass the first year, but by "saintly iteration" they can eventually be made winners. A very modest bill was introduced last year before the New York Legislature, but it failed of passage: it will doubtless be renewed. That bill was simply "an entering wedge," and called for a minimum appropriation of $10,000, for the blocking out of a refuge which might, in the course of time and by gradual accretion, grow to accommodate one to two thousand epileptics and epileptic insane. A commission of three experts was provided for, whose duty it should be to select a site of about 300 acres, and to obtain plans for a certain number of cottage-hospitals, with shops, schoolrooms, infirmary, pathological laboratory, dairy and outbuildings, suitable for agricultural and horticultural purposes. The bill further provided that the permanent government of the institution should be vested in a board of seven managers, to be appointed by the Governor of the State. There probably is no State in the Union—except two or three of the very smallest—that has not an epileptic population claiming the protection, development and training contemplated in that kind of proposed legislation. This seems to us the one great charitable object in regard to which the present generous generation has been remiss. Nearly every other known creature of suffering except the epileptic has his asylum, home or retreat; and this omission arises because our subject has been wrongly classified in the social categories. He has been placed either with the lunatic or the pauper, when he may be neither; although he may become both by the force of his environment. The State owes a duty to this misclassed citizen. Private philanthropy has a duty also, if the State continues negligent; and the institution at Bielefeld shows how nobly and effectively that duty can be fulfilled, when the right man takes the helm.

"OPEN" AND UNWHOLESOME FEBRUARY.

February is a month with few friends. Those ancients who made for us the calendar showed very little respect for it, judging from their manner of cutting it down as closely as they could. February stands between winter and spring—neither one thing nor the other—a kind of go-between, makeshift and afterconsideration. It was not always thus, for if we can pin our meteorology of former days to Shakespeare, February was once a good, honest winter month in England. That keenly observant bard described the month as being "full of frost and storms and cloudiness," a genuinely hyematic state of things. And we ourselves have in our boyhood days seen Februaries when we could go sleighing and skating, and we could then say to one another that winter sports must in that month be taken in to their utmost, by recalling the adage, "February is a bridge but March breaks it." Now, however, how different it is in the freezing and thawing—an open February seems to be the rule—supplemented perhaps by terrible March blizzards. England this year has had its February blizzard with a stoppage of traffic, but last year it had but little inclement weather. A year ago, *The Lancet* had some observations on the changing characteristics and unseasonableness of our second month, which will this year be more relevant here than on the other side of the ocean. The *Lancet's* remarks turned on the probable influence of a phenomenally mild winter—or considerable part thereof—upon the ensuing spring and summer, and claimed the existence of a "law"—bye-law, more properly, we would say—that seems to underly all the apparently erratic evolutions of the weather. This law is, that sooner or later the average of temperature and rainfall will be evened up. Exceptional excess or deficiency on one side will, before long, be balanced by other proportionate defects or excesses upon the other side. We have our heat and cold, our dry seasons and our wet ones, but the balance is very certain to be adjusted and the average made up. The writer in the *Lancet* thus continues: "Experience certainly shows that a very mild January and February are not unfrequently succeeded by a very severe March, but no general law beyond that which we have just indicated can be said to exist. That a fine February is a bad augury for the rest of the year is a belief which finds expressions in various popular saws: such as 'February fine and clear makes two winters in one year;' or, 'All the months in the year curse a fine February.' These saws have just this amount of foundation—that if the winter be unduly mild and dry, there is a probability that the spring may redress the balance by partaking of an exceptionally wintry character."

With the lengthening of the day, that is so perceptible in this month, there begins a decrease in the winter mortality, moving gradually northward from the Gulf States and the Mediterranean. In this way "the backbone of winter" begins to get broken. Even before the face of Nature brightens, the bills of mortality begin to grow lighter, and the vernal renewal of human life approaches; our subtropical neighbors being the first to be favored. All these considerations remind us that the world is both long and wide. To the south of us, and in Southern Europe, in Italy es-

pecially, the popular mind reverts each February to the mating of the birds, the sending of valentines and the consultation of the marguerite-daisy's petals. Outside of the conservatories, this climate yields very few marguerites for maidens to dissect leaf by leaf. The land of St. Valentine, the match-maker, would serve better in that respect. Or the south of France might answer, where dwelt that jovial soul the king of Yvetot, whom Béranger brought to light, *Roi, peu connu dans l'histoire*, the match-making king whose delight it was to see the baby crop a-blooming. He held that he was a member of the Valentinian family, by a side branch, and should be remembered about the middle of the second month. Perhaps we owe it to the denizens of those warmer districts that the notion has gone abroad that the daisy is the flower belonging to the month February; in our own literature it has rather a "previous" or strained appearance.

EXPERT MEDICAL TESTIMONY IN JURY TRIALS.

Recently the public have been treated to several new farces of the old superstition of grouping medical men on two opposite sides of a disputed case in court, involving questions of science.

The lawyers acting as generals, lead the experts up to conflict, enthused with the idea that the truth is the great object of the struggle. In reality, both sides care nothing for the truth; winning the case is paramount to every other object. The expert physician is seductively drawn up to make statements, then driven to retract or qualify them, and pressed to perjury, or so near it that it will be difficult to draw the line. Insulted and prevented from giving only a part of the facts, especially those which favor one or other side of the case, he is made to give a jumbled, confused mass of half truths and facts open to question, and explanation; and never permitted to give clear, straightforward, common sense views, or statements of the meanings of facts in their scientific sense. Both sides avoid informing the jury, and are always eager to deceive them.

The jury find themselves suddenly raised to an exalted position with no other qualification than that of profound ignorance of the case in court, coupled with general stupidity on all other questions, and inability, with disinclination, to form or give an opinion of any passing event.

Thus, the lawyers, judge, and jury are as uncertain as the shifting winds, and the entire scene is a comical farce. In one of the late battles of this kind, a large array of medical men were pitted against each other to determine the "old, old story" of boundary lines between sanity and insanity. Statements and counter-statements were hurled back and forth; authorities, both medical and legal, were quoted, praised and condemned. Theories a thousand years old were repeated as the latest facts in science; questions of physiology and psychology that are unanswerable from any present scientific knowledge, were treated with a familiarity and positiveness that was startling. The judge reviewed the case, and charged the jury with a grotesque assumption of knowledge, which, if he possessed, would have made him the most distinguished man on earth.

Thus the attempt to bring out expert medical testimony in the law courts of to-day, by the present *battledoor* and *shuttlecock methods*, is a disgraceful failure. If medical men would refuse to go on the stand as expert witnesses, and submit to the questioning of lawyers who want half truths or falsehoods that bear on their side of the case, some new method would be devised. All medical expert testimony should be given in written answers to questions. These answers should be long and judiciously considered, and explained clearly. Then an expert judge should try such cases, and review the testimony of the witnesses at length; having ample time to confirm or disprove the statements of such witnesses. Cases where the issue turns on a scientific knowledge of the facts should never be given to a jury of non-experts.

The late disgraceful exhibition of medical experts who are hired like horses to drive so far, and in such and such directions, with the proper harness and appointments for one purpose alone, is not a cheerful scientific aspect. No wonder most of the medico-legal writings and literature of the day are but fog banks of paid theories and opinions. The boast of some secular papers, that it is possible to buy medical opinions of every character and description, has some shadow of truth. This is an error for which the profession are more or less responsible. The fault is that physicians are not independent thinkers and teachers of public opinion. They are followers, and shrink from making statements opposed to popular sentiment. In the court-room the same shrinking from any statement that is in conflict with some legal opinion, is often noticed. Medical men should always teach both judge and jury, and never be led by them. Obviously a great field for change and improvement is opening up in this direction.

CHLOROFORM AS AN ANÆSTHETIC.

Notwithstanding the labors of the Hyderabad Commission, and of other scientific investigators, and the extensive clinical use of anæsthetics, it is certain that the relative merits of the two principal agents used to produce anæsthesia, are far from settled. While ether is so largely used in America, a word from one who has used chloroform extensively, and almost exclusively, during a period of forty years, can hardly fail to be of interest.

DR. LOMBE ATTHILL[1] commenced the use of chloro-

[1] British Medical Journal, January 16, 1892.

form in 1851, when assistant to the Master of the famous Rotunda Hospital of Dublin. During his assistantship, and afterward when Master, he used this anæsthetic in all cases of difficult or complex labor, and in many other cases, merely to relieve suffering. He estimates that he has thus used chloroform in midwifery cases, at least 3,000 times, and without a single untoward result. He has also used it in his gynecological practice, putting the number of times at 2,000, but stating that it was probably twice as many. Whatever be the exact number, it is certainly great. Of these latter cases one died under the anæsthetic, but the circumstances of the death were so peculiar, as to make it uncertain whether the chloroform was indeed its cause. The patient had a large ovarian tumor, and after taking a few whiffs of the chloroform, she ceased to respire. Artificial respiration was at once resorted to, and seemed about to accomplish the desired end, when, through the suggestion of a bystander, the head was lowered, and the hips raised, thus throwing the heavy tumor against the diaphragm. No respiration subsequently occurred. The heart continued to beat after respiration had ceased.

For a period of three months during his mastership, he used ether in his gynecological cases. During this time four deaths occurred which he ascribed to the ether, but it must be confessed that this is by no means certain, and that in blaming the ether he was not as fair to it, as he was to the chloroform, in the one fatal case which attended its use. Dr. Atthill regards chlorform at least as safe as ether, if the following conditions be observed: 1st. The chlorform must be pure; 2nd. It must be administered from an inhaler which will permit the admixture of an abundance of air; 3d. The anæsthetizer must pay strict attention to the pulse and respiration, and ignore the operation itself; and 4th. The needful degree of anæsthesia must be steadily maintained.

OPIUM SMOKING.

So much has been written of the evil effects of opium smoking, that the paper of Surgeon-General Sir Wm. Moore[1] comes somewhat in the nature of a surprise.

Opium smoking is not to be compared with opium eating. The opium is first prepared in such a manner as to deprive it of much of the narcotine. This prepared opium or "chaudul" is put into the pipe and brought into the flame of a small lamp, and the effect of the combustion is to destroy much of the active principle of the drug. Some of the morphia is sublimed and is deposited in the stem of the pipe. Sir George Birdwood concludes that nothing passes from deflagrating chaudul pill into the lungs but the volatile resinous constituents of the opium. Brereton says opium smoking is not only innocuous, but positively beneficial to the system. It is a complete preservative against drunkenness. Also that it is altogether exceptional to find an inordinate smoker. Agnew has known hundreds of smokers who never showed any decadence whatever. Birdwood states that opium smoking is a strictly harmless indulgence.

The typical sensational opium smoker with "emaciated appearance, lank and shriveled limbs, tottering gait, sallow visage, feeble voice, and general imbecility," seems to be rare, in China and India. Brereton, who was long a resident in China, sought in vain for them. Such results from the excessive use of the drug unquestionably occur, but Dr. Eatwell, who passed some years in China, stated that the effect of the abuse of opium is not very frequently observed. Many Rajpoot men who ride forty and fifty miles daily on camels, and who are hale and hearty, have used opium all their lives.

Even when used to excess opium does not lead to the noisy brutality produced by over-indulgence in alcohol.

He claims for opium many benefits, principally, its power of sustaining strength, and its prevention of the grosser alcoholic indulgence.

[1] The Provincial Medical Journal, February, 1892.

ELIMINATION OF TOXINES IN ENTERIC FEVER.

The toxicity of the urine is shown by its power to kill lower animals when injected subcutaneously. The average quantity found necessary to kill a rabbit of given weight, determines the normal uro-toxic co-efficient. This toxicity is a measure of elimination by the kidneys. MM. Roque and Weill,[1] of Lyon, have recently used this method in studying the elimination of toxines in enteric fever. First allowing a typhoid patient to proceed entirely without treatment they found that the uro-toxic coefficient was doubled, which may be accepted as fairly representing the unaided efforts of nature in this disease. But that this effort is insufficient is shown by the fact that toxicity of urine remains above normal for four or five weeks after the cessation of the fever. In patients treated by cold baths the uro-toxic coefficient becomes enormously increased, reaching five or six times the normal figures. This hypertoxicity decreases as the fever abates and the symptoms improve, and it reaches normal with the cessation of the fever. This indicates clearly that the cold bath is an eliminative treatment, and accords with the clinical observation of rapid convalescence after the use of this method.

Antipyrine, on the contrary, produces the opposite effect, and under its use the uro-toxic coefficient is diminished almost to that observed in health. This

[1] La Gazette Médicale de Montrèal, December, 1891.

effect may have several explanations. Either the antipyrine acts as a direct antidote, preventing the formation of toxines, or it hinders their excretion, or it postpones their formation. After the use of antipyrine the discharge of toxines is found to be enormously increased during the first week of convalescence. Further observations will be necessary to show how far each of these contingencies above mentioned result from the use of the antipyrine. TEISSIER has made similar experiments to determine the action of naphthol, and his investigations show that this substance is a true antiseptic, and hinders the production of toxic substances during both the disease and convalescence.

U. S. MARINE-HOSPITAL SERVICE.—A board of officers will be convened in Washington, May 2, 1892, for the purpose of examining applicants for admission to the grade of Assistant Surgeon in the U. S. Marine-Hospital Service.

Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: 1, physical; 2, written; 3, oral; 4, clinical.

In addition to the physical examination candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercises consists in examination on the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and the natural sciences.

The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order, as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After four years' service Assistant Surgeons are entitled to examination for promotion to the grade of Passed-Assistant Surgeon.

Promotion to the grade of Surgeon is made according to seniority and, after due examination, as vacancies occur in that grade. Assistant Surgeons receive $1,600, Passed-Assistant Surgeons $1,800, and Surgeons $2,500 a year. When quarters are not provided, commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed.

All grades above that of Assistant Surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years service, up to 40 per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For further information, or for invitation to appear before the Board of Examiners, address

(Signed) WALTER WYMAN,
Supervising Surgeon-General, M.H.S.

The Annals of Surgery will hereafter be published in Philadelphia.

SELECTIONS.

THE Register-General of England and Wales says that the epidemic influenza of 1890 killed twenty-seven thousand people in those countries.

SICK HEADACHE.—Sulphite of sodium in five-grain doses, repeated three or four times daily, is a frequent cure for this distressing complaint.

THE best vehicle to keep bismuth in solution is pure glycerine. This conclusion was arrived at after experimenting with various other substances.—*Med. Tribune.*

DEAFNESS.—In deafness resulting from dry catarrh of the middle ear, Dr. C. Miot has seen good results from instillation of liquid vaseline. He has never seen this method produce new growths of the tympanum, as is feared by some authorities.—*Gazzetta degli Ospitali.*

ICHTHYOL IN ERYSIPELAS.—Dr. Julius Fessler, of Munich, claims to have had excellent results in the treatment of erysipelas by means of ichthyol internally and externally employed. It is, he says, inimical to the life of the streptococcus, thereby curing the disease in a few days.—*Medical Record.*

NEW OPERATION FOR HERNIA.—Lawson Tait has devised a new operation for the radical cure of hernia in every variety. It is: Median abdominal section. The intestines are to be drawn up from within, and the ring carefully closed on the inside with silk-worm gut sutures.—*Kansas City Medical Record.*

DONOVAN'S SOLUTION IN GLEET.—The solution of the iodide of arsenic and mercury is said to be of material service in the treatment of gleet. A correspondent of the *Medical Record* feels that he is justified in calling this remedy almost a specific for gleet, so uniform has been his success with it. It should be given for this purpose, in doses of ten minims, three times daily.—*Kansas City Medical Record.*

BED-SORES.—Dr. Keen says that an excellent treatment for bed-sores is the alternate application of cold and hot poultices. Apply a cold flaxseed poultice in which have been placed small pieces of cracked ice; let this remain for ten minutes, and then apply a hot flaxseed poultice. After two hours apply another cold poultice and then another hot one.—*College and Clinical Record.*

RHUS AROMATICA is a valuable remedy in enuresis of children; dose, from five to ten drops three times a day of the fluid extract. It will also sometimes cure what is believed to be diabetes. Its exhibition in small doses three times a day will steadily decrease the amount of urine passed, and relieve the inordinate thirst. It is the remedy for hæmorrhage of kidneys and bladder.—*Med. Tribune.*

PRESCRIBING OPTICIANS.—Ophthalmologists in this country will be ready to congratulate, while yet they envy, their brethren in France, in view of a recent decision of a court in Havre. The judge ruled that an optician who gives a patient advice as to the condition of his eyes and prescribes glasses to remedy defective vision is guilty of the illegal practice of medicine, just as if he had ordered remedies or given medical advice without possessing a diploma recognized by the law.—*Medical Record.*

TYPHOID BACILLI IN DRINKING WATER.—Kamen (*Centralbl. f. Bakt. u. Paras.*, January, 1892) refers to the difficulties experienced in demonstrating typhoid bacilli in water before the addition of carbolic acid solution to the culture was suggested, with the object of limiting the development of other

microörganisms also present. According to Parietti, one to ten drops of the water to be examined are added to 10 ccm. of neutral bouillon, with three, six or nine drops of carbolic acid solution (carbolic acid 5 g., pure hydrochloric acid 4 g., distilled water 100 g.). This is kept at 37° C., and, if it become turbid, it is almost certain to contain typhoid bacilli. In a small epidemic of twelve cases occurring in a regiment, the author was able to exclude other possible sources of infection except drinking water. This latter he examined after Parietti's method, and ultimately obtained a pure cultivation of typhoid bacilli. The only way these bacilli behaved atypically was in their mode of growth upon potato, but this has been noted by others. Their behavior was like that of typhoid bacilli obtained from other sources, and the microörganisms obtained in a pure cultivation from the spleen of one of the fatal cases were identical with them. Kamen says that this is a striking example of the propagation of enteric fever by drinking water. About six months previously there had been several cases of enteric fever among the civil population, but no direct connection could be traced between these and the author's cases.—*Brit. Med. Journal.*

The Treatment of Hæmoptysis.—Professor H. Nothnagel publishes in a Vienna medical journal an interesting paper on the treatment of hæmoptysis. The first thing, he says, is absolute rest. If the loss of blood is at all serious, the patient must not utter a sound; if it is necessary he should speak, he must only whisper, or better still, write down everything he wants to communicate. He must not be allowed to see visitors, and the sick-room must be kept at an even temperature. The patient must take nothing warm, nor anything likely to excite or irritate. The best food for the first two days is cold milk. Regular diet may then be resumed gradually, but all food which might increase the action of the heart must be avoided in future. Formerly an opinion prevailed that the patient should be allowed to cough, the retention of the blood being supposed to be hurtful, as it was believed that tuberculosis was a consequence of hæmoptysis, but this opinion is quite erroneous. On the contrary, one of the first indications is to suppress all inclination to cough as much as possible, for which purpose morphia is the best remedy. Should the hæmoptysis not cease, other remedies must be applied. The author first mentions those remedies which ought to be eschewed, and the use of which is occasionally a physiological error. The first to be banished is perchloride of iron, the action of which on the blood is to cause it to coagulate and to form a thrombus. In the form of inhalation it would be simply useless, but for the great danger in allowing a patient suffering from hæmoptysis to draw a deeper breath than absolutely necessary for respiration. The liquor ferri, if administered internally, is, according to some, not absorbed at all, but, even if it be so, it would only tend to increase the hæmoptysis. The same may be said of tannic acid and of alum, which contract the blood-vessels only when diluted to one-sixth per cent., and are consequently useless for hæmostatic purposes, as well as for inhalation. The author dispenses altogether with inhalation in hæmoptysis. The only two hæmostatic remedies he recommends as useful are ergotine and acetate of lead; the first may be used internally and in hypodermic injections, the latter may be given in conjunction with opium. Another remedy which he mentions, but of which he has himself no experience, is hydrastis canadensis. A few years ago hypodermic injections of atropine were recommended, and Prof. Nothnagel has occasionally seen them effective. No objection can be raised to half a teaspoonful of common salt when no other remedy is at hand. Hæmorrhage from the lungs is certainly sometimes arrested by its use, but the author is not quite sure if the success is *post hoc* or *propter hoc*. Nor is he certain whether, as supposed by some, a reflex irritation of the pulmonary vessels takes place. This theory is certainly physiologically feasible, as recent experiments have shown that sensory excitement in some parts causes the blood-vessels in other parts to contract. An application of ice, for instance, to the abdomen, causes anæmia of the mucous membrane of the larynx. A very common remedy is the application of cold; but the ice-bag is, according to the author, of very doubtful value, as it is impossible to assume that the cold acts directly on the bleeding surface, for we do not know to what depth it penetrates. If the cold does act hæmostatically, the effect must be due to irritation of the skin. Professor Nothnagel warns us, however, that in some people the application of cold to the thorax causes cough, which is far more dangerous than the doubtful contraction of the blood-vessels can be useful. An extreme and heroic remedy is venesection. It is a well-known fact that wounded soldiers faint from loss of blood, when the hæmorrhage immediately stops, and a similar observation has been made in metrorrhagia and hæmoptysis.—*London Lancet.*

Disinfection of the Hands.—Dr. H. A. Kelley, after giving the details of a large number of experiments made by himself and his associates, gives the following conclusions as to the best method of disinfecting the hands:

Scrubbing the hands, with especial attention to the nails,—not more than one millimetre in length—for ten minutes in water, frequently changed, at about 104° F. Immersion of the hands in a solution of permanganate of potassium, made by adding an excess of the salt to boiling distilled water, until every part of the hands and lower forearms is stained a deep mahogany red or almost black color. They are then transferred at once to a saturated solution of oxalic acid until completely decolorized and of a healthy pink color. Washing off the oxalic acid in warm sterilized water.

By this simple process the hands are rendered more nearly absolutely aseptic than by any other known means.

The author has found that it is impossible to get rid of staphylococci by scrubbing the hands and nails from ten to twenty-five minutes with a sterilized brush, soap, and water, temperature 104° F. The bichloride of mercury solutions as used, up to 1 : 500, are not germicidal, as supposed. Previous erroneous conclusions as to the efficiency of the bichloride are shown to be due to an inhibiting action which may persist at least twenty-four hours after the last use of the drug. Hydrogen peroxide and lysol (four per cent.) were tested and found wanting.

In the present state of our bacteriological knowledge as to the causes of inflammation and suppuration, we are bound to use every means in our power to avoid sowing any unnecessary germs in our wounds. Soap and water are, Dr. Kelly believes, the best disinfectants, if we use but one, for they remove all germs which will come away easily. The bichloride of mercury, although dangerous on wounds on account of its property of coagulating and causing necrosis of albuminous tissues, has the valuable property of inhibiting those germs with which it comes into contact. Permanganate of potassium and oxalic acid are harmless to the hands and are germicidal. Soap and water plus the permanganate of potassium and oxalic acid are the only true germicides, and therefore the best disinfectants we possess to-day.—*American Journal of Obstetrics.*

Objections to Placing Hot Air Registers in Floors.—We have noticed on several occasions a most disgusting, if not dangerous, practice arising from placing hot air registers in floors. Reference is made to using the register for the purpose of a cuspidor. If attention is paid to this, one

will be surprised to note the number of persons guilty of this act.

Recently in a hotel heated by natural gas, and having a large hot air register in the floor, we saw not less than half a dozen persons discharge their saliva into it. One of these was the proprietor of the hotel, an old man suffering from chronic bronchitis with a copious muco-purulent expectoration. One can scarcely imagine anything more horrible. And if we consider that consumptives may sometimes cast their expectoration into the register, the danger of the practice becomes apparent; for a more efficient method of scattering the germs of tuberculosis through the air of an apartment could not be devised.

The floor is seldom or never the place for a hot air register. With the greatest possible care a considerable amount of dirt will collect in it, polluting the air more or less, that enters the room. In the absence of cuspidors, it always offers a tempting place for the chewers of tobacco to dispose of their spittle without betraying their filthy habit. Persons coming in from out of doors, with wet, dirty feet, will nearly always stand over the register to dry their shoes, affording another source of air pollution. Other objections present themselves, but those given should suffice to condemn placing hot air registers in floors, and especially in public places.—*Monthly Sanitary Record* (Ohio).

CAMPHORATED SALOL.—Dr. Pégon has recently reported in the *Revue de Thérapeutique* some very favorable experiences with camphorated salol in the treatment of suppurative disease of the middle ear. The formula for the preparation, devised by M. Desesquelles, is as follows: Equal parts of salol and camphor are mixed and heated until fusion is complete, without water, alcohol, or any other solvent. The mixture is then filtered and preserved in a yellow glass bottle hermetically sealed. Thus prepared, camphorated salol is a thick, colorless, unctuous liquid, soluble in ether, chloroform, or oil, but insoluble in water. Light and air decompose it rapidly. Its application is neither painful nor irritating, and it seems to possess the property of rapidly curing a distressing and very intractable disease. It is applied upon a small pledget or tampon of cotton-wool; to this may be attached a fine thread by which the patient can remove it after twenty-four hours. The ear should previously be washed out with a weak boric-acid solution, and the washing should be repeated once or twice daily when the tampon is not in position. The applications are made once in two or three days, and, if the suppuration is not profuse, the tampons may be left *in situ* from one application to another. The time required for a cure varies from four to twenty days. Dr. Pégon has found the method to succeed where the more popular ones have failed, and says that even where it has not made a perfect cure it has always diminished the fœtor and amount of the purulent discharge.—*N. Y. Med. Journal.*

EARTH WORMS AND TUBERCLE BACILLI.—In a communication presented to the Paris Academy of Sciences on January 25, Lortet and Despeignes (*Sem. Méd.*, January 27, 1892), after recalling the experiments by which Pasteur showed that earth worms often bring to the surface the spores of the anthrax bacterium from the earth in which animals that have died of that disease have been buried, said they had made experiments to ascertain whether these worms played a similar part in regard to the tubercle bacillus. They have satisfied themselves that earth worms may preserve within their bodies for several months tubercle bacilli which retain their vitality and virulence unimpaired. Lortet and Despeignes therefore believe that under certain circumstances the worms may be the means of disseminating the microörganisms of tuberculosis. The authors claim that this is the first time the possibility of easy tuberculisation of an invertebrate animal has been experimentally demonstrated.—*British Medical Journal.*

CHANGES IN THE CORTEX CEREBRI IN TUBERCULOUS MENINGITIS.—Goodall (*Brain*, Autumn number, 1891) has studied these changes in fresh specimens. He finds in the cortex just under the meninges very small round cells and also numerous flask-shaped cells which give off many fine processes, forming a meshwork with neighboring cells. These cells, as some of their processes reach the meninges, explain the adherence of the pia mater to the brain, to which also the vessels which dip in are closely bound. These cell processes cannot be traced deeper than the third layer of cortical cells. The minute vessels are dilated. In many specimens the nerve cells of the second and third layers are stunted and atrophied, often only the nucleus being left. As these degenerated nerve cells are always in close contact with the spindle cells, which are probably to be looked upon as scavenger cells, it appears that the degenerate nerve cells are taken up by them.—*British Medical Journal.*

A CHEAP DISINFECTANT.—The nitrate of lead is the cheapest disinfectant known that fulfills its intent. It does not, however, prevent putrefaction. The chloride of lead is much more effective in all directions. It is made by dissolving a small teaspoonful of nitrate of lead in a pint of boiling water. When both are thoroughly dissolved, pour the two mixtures together, and when the sediment has settled you have two gallons of clear fluid, which is the saturated solution of the chloride of lead. A pound of nitrate will make several barrels of the liquid. The nitrate of lead costs from eighteen to twenty-five cents a pound at retail.—*Medical Bulletin.*

TURPENTINE IN PNEUMONIA.—For the past four years I have relied almost entirely in the treatment of pneumonia on the oil of turpentine regardless of the stages of the disease, the pulse or temperature, giving it in adults in doses from 30 to 60 minims every two or three hours, either in capsules or in emulsion, the former preferred. This treatment, aided by constant *dry heat* to the lungs, front and back, with hot milk diet or beef essence, has really seemed to me to have robbed the disease of all its horrors. When first told of this treatment by Dr. Juke Johnson, of Canada, to whom I will always feel indebted, I naturally feared strangury, but in but one single case out of a great many have I seen a single symptom.—J. M. K., in *Hot Springs Medical Journal.*

AN INVALUABLE MILK SUPPLY.—From time to time attention has been drawn to the advantages of goat's milk as a diet for young children, and in the treatment of persons suffering from wasting diseases. Though its use is better appreciated of late, goat's milk does not yet take the position it deserves in the estimation of the profession or the public. There is a fact, probably, with reference to goat's milk, which if generally known certainly would enhance its value and largely extend its use: goat's milk is free from the element of danger in cow's milk—it is not liable to tuberculous infection. For this statement we have the support of no less an authority than Professor Nocard. In an article on the utility of the goat, by M. Pion, in the *Revue des Sciences Naturelles Appliqués*, M. Nocard is quoted as saying that "out of over 130,000 goats and kids that are brought to Paris for slaughter at the shambles of La Villette every spring, the meat inspectors of that city have failed to discover a single case of phthisis." Considering the important part milk takes in the diet of children and invalids, and that in this country it is ordinarily ingested raw, it is surely a great gain to the public to have a milk free from risk. Hitherto the ass has been regarded as the only reliable source from which milk free from any suspicion of tuberculous taint could be

obtained; but whereas a milch ass is procurable with difficulty, and the supply it gives exceedingly scanty, a milch goat is more readily obtained, easier to milk, and has a greater and more prolonged supply.—*Brit. Med. Journal.*

How to Drink Milk.—Why milk is "distressing" to so many people, as they commonly complain, lies in the method of drinking it. Milk should never be taken too quickly, or too much at one swallow. If a glass of it is swallowed hastily it enters into the stomach and then forms one solid, curdled mass, difficult of digestion. If, on the other hand, the same quantity is sipped, and three minutes at least are occupied in drinking it, then on reaching the stomach it is divided, and proper digestion is obtained, as well as a most nutritious effect.—*Health Journal.*

Dr. Wm. I. Hamlin says that children under two years often suffer from fissures of the anus, and all cases of painful defecation should be carefully searched for fissure; which, when found, should be stretched and then touched with a sharp pencil of lunar caustic. One or two applications will generally cure the fissure. The cause of constipation and hard stools should be eliminated by changing the diet of the child.—*Ex.*

A Case of Poisoning by Pilocarpine.—A Belgian officer with an affection of the eyes was treated by the injection of two centigrams of this drug. Immediately his neck and then the whole of the body became bathed in sweat, in two or three minutes he was salivated, and suffered from cardiac oppression and difficulty of breathing, he fancied his chest was full of fluid, and afterwards he expectorated some frothy mucus. The cardiac oppression lasted about ten minutes, but for two hours the patient continued to have a feeling of constriction at the pit of the stomach. During this time he suffered from lacrymation, running from the nose, gastralgia, and nausea; he vomited three times, and passed his urine involuntarily. The intestinal peristalsis became violent and he had tenesmus. His eyes were fixed, and he could not recognize anyone twenty centimetres distant. The pulse was quick and small, the sufferer being in a condition bordering on collapse. By means of internal and external stimulants the symptoms disappeared.—*London Lancet.*

Compression of the Carotids as a Therapeutic Measure.—In a recent number of the *Gyógyászot* Dr. Leopold Roheim, of Budapest, publishes a case of eclampsia which he had, after the failure of a large number of remedies, successfully treated by compressing the carotids with his fingers. The publication of this case recalls the fact that the whole subject of carotid compression in its relation to the treatment of nervous diseases was thoroughly worked up by Dr. J. Leonard Corning over ten years ago. Not content with following the ancient practice of pressing upon the carotids with the fingers, Dr. Corning devised a number of ingenious instruments by means of which he was able to compress those arteries and faradize the subjacent sympathetic and pneumogastric nerves at the same time. He has embodied the results of these researches in a number of papers, and notably in a little book, *Carotid Compression*, published in 1882. Dr. Corning's contributions are especially valuable, as the conclusions arrived at are based upon a large array of cases of nervous disease in which the method was given a thorough trial. Cases of headache, eclampsia, convulsions of children, epileptic convulsions, and obstinate insomnia as it occurs in the insane were treated successfully in this way.—*New York Medical Journal.*

Effect of Alkalies on Metabolic Change.—As the effect of alkaline drugs upon the nature of the metabolic changes which albumen undergoes in the system has not been satisfactorily worked out, Dr. Yavein has made a series of elaborate observations on the subject, employing citrate and carbonate of soda for the purpose. The daily quantities of the drugs administered were 300 grains or more. The results showed as a rule that there was but little effect either on the assimilation or on the metabolic change of albumen. There was, however, a considerable increase in the neutral phosphates as compared with the acid phosphates of the urine. As a rule, the loss from the skin and lungs was diminished, and after the alkali had been discontinued the quantity of urine increased. The body weight increased while the alkali was being taken, and decreased afterwards, the increase being probably due to the diminished loss of moisture, and the decrease to the augmented secretion.—*London Lancet.*

Jefferson Medical College has secured the ground on south Broad street, between Catherine and Christian, for her new location. This is nearly a mile below Market street. The Ridgway Library is nearly opposite, and Howard, St. Agnes and the Polyclinic Hospitals in the vicinity.

The New General Hospital, Hamburg.—This model hospital is situated at Eppendorf, four and a half miles from the town, from which it is reached by tram-lines (street railway) running into the hospital grounds. It occupies forty-five acres of undulating ground of sandy soil, and comprises eighty-three separate buildings, for the most part one story high. The wards are constructed on the pavilion principle. The floors are marble, imbedded in cement. The total cost was $2,170,000, or $1,170 per bed. The cost of maintaining it in 1889 was $265,000. There are twenty-six medical advisors, ninety female nurses, and one hundred and four male attendants.—G.F.S., *Weekly Medical Review.*

Hyoscyamine in Chorea.—Prof. Da Costa continues to derive good results by the administration of hyoscyamine in cases of *chorea* which have resisted other treatment. In a recent case, a child aged 5 years, it was given in 1-300 grain doses, ter die, to be increased.

Influence of Cold on the Production of Pneumonia.—Lipari, in a paper on the above subject, says that, along with the pneumococcus, cold is of great influence in causing the pneumonia. Animals which have remained well after an intra-tracheal injection of pneumonic sputum become affected with pneumonia very quickly if exposed, either before or after the injection, to cold. The author thinks that the cold disables the ciliated epithelium of the bronchi, and causes a swelling of the mucous membrane, by which means the entrance of the infectious material into the alveoli is facilitated.—*Boston Med. and Surg. Journal.*

NECROLOGY.

Samuel Curtis Robinson, M.D.

Memorial note, adopted by the Kings County Medical Association at its meeting in February, 1892, respecting the death of their late fellow member, Samuel Curtis Robinson, M.D.:

This Association has learned with profound regret, of the loss by death, of one of its early and most attentive members, in the person of Dr. S. C. Robinson, and has ordered that a minute, expressive of their esteem and regret, shall be formed for permanent record.

In the death of our late Fellow, we have lost one of the earliest advocates of the purposes of this organization. While not an active practitioner of medicine, and not prominent in public discussions of medical questions, he was

thoroughly interested in matters bearing upon life insurance, health protection and the progress of therapeutics, and was an eminently clear and logical judge in discussion of these questions. Dr. Robinson was a native of Guilford, Connecticut, born there in September, 1830. He was prepared by his father for Yale College, from which institution he was graduated in his twenty-second year. In 1855 he was granted his M.D. degree at the Medical Department at New Haven. After taking an additional course at the College of Physicians and Surgeons, New York, he traveled in the west and engaged in medical practice. He returned to New York and for a few years held the position of surgeon on one of the Trans-Atlantic steamship lines. During the war he served on the governmental transports, McClellan and some others. In 1865 he again resided in New York, and for several years occupied the position of medical examiner for the North America Life Insurance Co., and other companies. In 1867 he married the only daughter of the late Dr. James H. Henry, of Brooklyn, in which city he has ever since resided. His wife, one son, and one daughter survive him. He died after a short illness, December 20, 1891.

Resolved, That this Association keenly regrets the untimely death of their associate member, and will feel the absence of his sincere counsel and coöperation, and must feelingly sympathize with the members of his family in their sorrowful bereavement.

Signed.

R. M. WYCKOFF,
W. P. BEACH,
Committee.

Brooklyn, N. Y., February 1, 1892.

DR. JAMES SWEENEY, of Brooklyn, New York, died February 18, aged fifty-four years, from an attack of epidemic influenza, eventuating in cardiac failure. He was a native of Wales, but came to this country when a child. He was an alumnus of the Albany Medical College, in 1859, and a resident of Brooklyn since 1865. He was prominent in public affairs, especially in connection with sanitary matters and the Board of Education.

DR. JAMES CHRISTIE, of Glasgow, editor of the *Sanitary Journal*, died in January, aged fifty-five years. As an epidemiologist and sanitarian he acquired a high reputation. He at one time lived in East Africa, and was the trusted physician of the Sultan of Zanzibar. He was also connected with the Zanzibar Dispensary and Hospital, conducted by the Universities of England Mission. His little Journal, edited by him continuously from 1878, has been an evangel of sanitary reform in the Scottish cities whose *paurres faubourgs* suffer so much from overcrowding and uncleanliness, the inheritance of long generations of conservatism and landlordism. The *Sanitary Journal* was the means of doing much good, by championing, early and late, the rights of the poor rent-payer in the tenement houses, who was also the eventual and chief tax-payer. In Glasgow there is a population of 75,000 of this class, who are described as not only "paying interest on their poverty, but on character also." They comprise the criminal elements and the whole social *debris* of that city; some are making a brave fight against poverty, while more are bankrupts alike in fortune and in character. "They are the nomads of our population," as Dr. James B. Russell has said in Dr. Christie's *Journal*; "if we could see them in their constant movements from place to place, the sight would resemble nothing so much as that which meets our eye when we lift a stone from an ant's nest." It was for these human ants that Dr. Christie labored so many years, and for whom he accomplished so much.

BOOK REVIEWS.

HUMAN MONSTROSITIES. PART II. By BARTON COOK HIRST and GEORGE A. PIERSOL.

This, the second part of what bids fair to be the best teratological treatise extant, is fully up to the previous volume in point of excellence. The plates are superbly executed and the illustrations have been made with the specimens in the most advantageous positions for purposes of study.

MISCELLANY.

ASSOCIATION OF AMERICAN PHYSICIANS—PRELIMINARY ANNOUNCEMENT.—The next annual meeting of the Association of American Physicians will be held on Tuesday, Wednesday, and the morning of Thursday, May 24, 25 and 26, 1892, in the Medical Museum and Library, Washington, D. C.

The subject selected for discussion is Dysentery. Dr. William T. Councilman, as Referee, will consider the Etiology and Pathology, and Dr. A. Brayton Hall, as Co-Referee, the Symptomatology, Complications and Treatment.

The following members will present papers:

Henry M. Lyman—The President's Address.

Charles Carey—The Production of Tubular Breathing in Consolidation and other Conditions of the Lungs.

Samuel C. Chew—(Title to be announced later).

William C. Dabney—A Contribution to the Study of Hepatic Abscess.

I. N. Danforth—Tube Casts and their Diagnostic Value.

George M. Garland—The Treatment of Follicular Tonsillitis.

Heneage Gibbes—The Morbid Anatomy of Leprosy.

Hobart A. Hare—A Collective Investigation in regard to the Value of Quinine in Malarial Hæmaturia or Malarial Hæmoglobinuria.

A. Jacobi—(Title to be announced later).

W. W. Johnston—Treatment of Acute Dysentery by Antiseptic Colon and Rectal Irrigation.

Thomas S. Latimer—Alcoholism.

Morris J. Lewis—A Study of the Seasonal Relations of Chorea and Rheumatism for a period of fifteen years.

Morris Longstreth—(Title to be announced later).

Francis T. Miles—A Case presenting the Symptoms of Landry's Paralysis, with Recovery.

William Pepper—Report of a Case of Glanders, with results of Bacteriological Study.

T. Mitchell Prudden—(Title to be announced later).

George M. Sternberg—Practical Results of Bacteriological Researches.

Charles G. Stockton—Misconceptions and Misnomers Revealed by Modern Gastric Research.

William H. Thompson—The Significance of Intermission in Functional Nervous Diseases.

Victor C. Vaughan—Certain Toxicogenic Germs found in Drinking-Water.

B. F. Westbrook—Studies in Hypnotism.

James C. Wilson—Pulsating Pleural Effusions.

George Wilkins—The Cold Water Treatment of Typhoid Fever.

Members wishing to present papers are requested to send their names, with the title of the papers, to the Secretary. Papers can be read by title at the meeting, and appear in the volume of Transactions.

The Constitution of the Association (Article VI, sections 4 and 5) provides that: Authors of papers, and referees and co-referees, who open a discussion, shall not occupy more than thirty minutes each; and in the discussion following, the remarks of each speaker shall be limited to ten minutes.

The referees, co-referees, and authors of papers, shall send abstracts of their papers to the Council, for distribution to members previous to the meeting.

This provision, however, does not preclude a fuller or more detailed presentation of the subject in the articles prepared for the Transactions, but the limits of time prescribed for the reading of the papers will be enforced.

HENRY HUN, Secretary.
33 Elk St., Albany, N. Y.

OFFICIAL LIST OF CHANGES in the Medical Corps of the U. S. Navy, for the Week Ending February 27, 1892.

P. A. Surgeon V. C. B. Means, detached from Naval Hospital, New York, and to Navy Yard, New York.

Asst. Surgeon George A. Lung, detached from Navy Yard, New York, and to Naval Hospital, New York.

P. A. Surgeon E. H. Marsteller, detached from Marine Rendezvous, Baltimore, and wait orders.

P. A. Surgeon F. J. B. Cordeiro, detached from Marine Rendezvous, Boston, and to the U. S. S. "Adams."